F·A·A·M facility for airborne atmospheric measurements

FLIGHT FOLDER

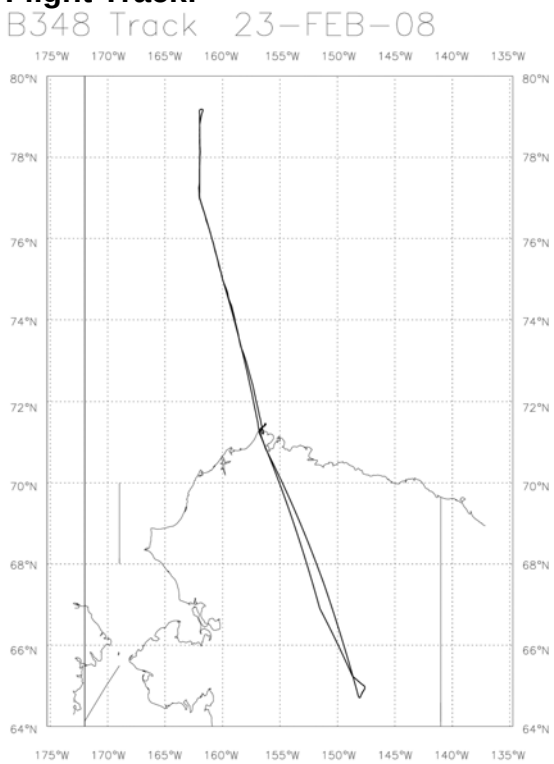
Flight No.	B348	
Date:	23/4 February 2008	
Take Off:	19:49:48Z	03:06:39Z
Landing:	01:28:53Z	04:35:32Z
Flight Time	5h39m05	1h28m53

Campaign: CLPX II

Operating Area: Brooks Range and North Slope Ground Sites, Alaska

POB	Position	Name	Institute
1	Captain	Alan Foster	Directflight
2	Co-pilot	Luc Lathouwers	Directflight
3	CCM1	Gaynor Ottaway	Directflight
4	Mission Scientist 1	Jon Taylor	Met Office
5	Flight Manager	Alan Woolley	FAAM
6	Core Chem	Bob Wells	FAAM
7	Cloud Physics / CCM2	Kate Turnbull	FAAM
8	SWS	Ian Rule	Met Office
9	CVI / Nephelometers	Rob King	Met Office
10	DEIMOS	Dave Pollard	Met Office
11	ARIES	Joss Kent	Met Office
12	Mission Scientist 2	Chawn Harlow	Met Office
13	Dropsondes	Doug Anderson	FAAM

Flight Track:

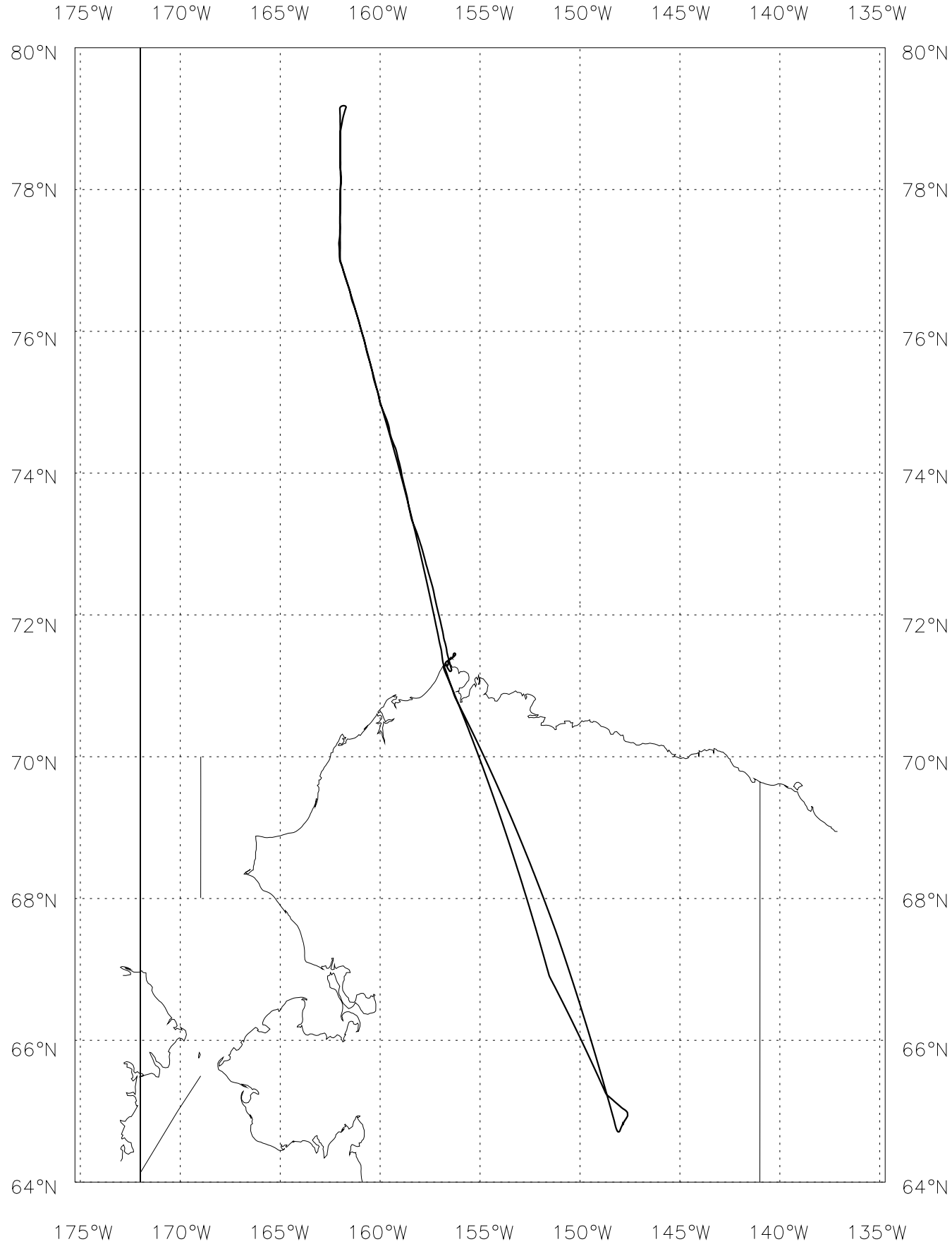


FLIGHT SUMMARY

Flight No B348
Date: 23/02/08
Project: CPLXII
Location: North of Barrow

Start Time	End Time	Event	Height (s)	Hdg	Comments
191311		GPS lock on	0.29 kft	217	5 mins outside
191640		asp open	0.29 kft	217	
191735		engine start	0.28 kft	217	
192756		engine shutdown	0.28 kft	217	
193511		engine start 2	0.28 kft	217	
194104		power change	0.28 kft	217	
194256		taxi	0.28 kft	217	start
194948		T/O	0.27 kft	218	from Fairbanks
200452		contrailing	23.3 kft	336	
202038		BBR	24.0 kft	332	Exposed
210403		BBR	24.7 kft	325	covered
211041	221625	Run 1	28.0 kft	323	
211253		Sonde1	28.0 kft	332	
212036		BBR	28.0 kft	344	Exposed
212545		Sonde 2	28.0 kft	342	
214043		Sonde 3	28.0 kft	342	
215543		Sonde 4	28.0 kft	341	
220947		Sonde 5	28.0 kft	344	
221650	222520	Run 1.1	28.0 kft	359	
222455		Sonde 6	28.0 kft	001	
222548	225853	Profile 1	28.0 - -.29 kft	000	
222640		BBR	27.0 kft	004	covered
223833		Profile 1	16.2 kft	000	interrupt
224022		Profile 1	16.2 kft	188	resume
225156		Copilot GPS	4.7 kft	187	temporarily down
225900	232300	Run 2	-.21 - -.30 kft	181	
231622		qnh 1027	-.27 kft	188	
231730		BBR	-.25 kft	189	Exposed
232331	251451	Run 2.1	-.28 - -.53 kft	166	turn towards barrow
233422		qnh 1029	-.35 kft	171	
233802		qnh 1030	-.34 kft	171	
245940		qnh	-.54 kft	168	1038
251906	252009	Run 3	-.10 - -.14 kft	057	at Barrow
252417	252540	Run 4	-.32 - -.06 kft	236	
252853		Land	-.64 kft	270	at Barrow
030639		T/O	-.66 kft	359	from Barrow
030639	033535	Profile 2	4.3 - 26.9 kft	359	
043532		Land	0.24 kft	359	at Fairbanks

B348 Track 23-FEB-08



PAFA -> PABR - Overview

NavData Cycle 2008-2 Expires: Thursday, 13 March 2008.
Scale: 1:6008471 (1 inch = 82.41 naut mi). Printed on 22 Feb 2008

JEPPESEN
FliteStar 9.3.0.0

SORTIE BRIEF

CLPX-II – Land and Sea Ice Surface Property Studies.

Flight B348 Mission Scientist: J Taylor
Date: 23rd Feb 2008

Science Aims: To characterise the land/sea ice surface properties under an overpass of the IASI satellite at 2119Z. Also to overfly a sea ice monitoring site just north of Barrow.

Weather: Cloud free conditions at all levels.

Waypoints:
Alpha 70 °48.7'N 156° 12.2'W
Bravo 77°N 162°W
Charlie 71°22.25'N 156°32.20'W

Sortie Details:

1. 1945Z (1045L) Take off and transit to arrive at ALPHA at FL280 (90mins)
2. 2115Z (1215L) Straight and level run from ALPHA to BRAVO at FL280 dropping 5 sondes at times (0,15,30,45,55) (60mins)
3. 2215Z (1315L) Profile descent to end at BRAVO at 50ft 1000ft/min descent (35mins)
4. 2250Z (1350L) Straight and level run from BRAVO to ALPHA at 100ft (90mins)
5. 0020Z (1520L) Fly series of passes over ice station at point CHARLIE (30mins)
6. 0050Z (1550L) Land at Barrow for refuel
7. 0250Z (1750L) Transit back to Fairbanks. (90mins)
8. 0420Z (1920L) Land at Fairbanks

CLPX II B348 23rd Feb 2008 Debrief
Mission Scientist: Jonathan P Taylor

The aim of the flight was to study the sea ice NW of Barrow. The transit to the area was at FL240 and there was extensive cloud below the aircraft during the entire transit with variable cirrus above.

Way point Alpha was defined over the land South of Barrow and we climbed to FL280 to start this run. As we approached the start of the run the cloud dissipated at all levels and we kept cloud free conditions for the remainder of the sortie with the exception of ice crystals in low concentrations trapped in the surface layer.

A long run was flown from Alpha to a point at 79N 162W during which time 6 drop sondes were launched to characterise the atmospheric state. There was pretty good visibility to the surface but there was a distinct layer above the surface where vis was poorer.

The profile to 50ft over the sea ice clearly indicated the presence of small concentrations of small hexagonal columns which resulted in optical phenomena being seen. These poorer visibility conditions were in the form of isolated pockets which we flew through and noted the positions. The run back South was flown at 100ft above the sea ice and lasted 2hrs 15mins. There were isolated leads but a fairly consistent ice structure all the way back to Barrow.

After arriving back at Barrow we flew a short run over land and then flew two runs at 500ft over the ice station site operated by Univ. of Alaska, Fairbanks.

After the refuel stop at Barrow a scientific profile ascent was flown up to FL260 and then a straight transit back to Fairbanks.

Summary
The weather conditions were excellent with good cloud free conditions. The only exception being low concentrations of ice crystals in the boundary layer. All dropsondes worked and the high level runs were coordinated with IASI and NOAA overpasses. The only instrument snag was Deimos where the 24 and 50GHz channels were intermittent throughout the sortie and only post flight analysis will show whether we were able to get any useful data from Deimos for the flight.

Mission Scientist's Log

ICPX-II

DigiMemo e-Page .....

Flight No B348..... Date 23/2/08 Name Jon Taylor Page ...1... of ...5...

GMT	Run / Profile	Height	Hdg	GPS Position	Remarks (clouds, weather, visibility, winds, sea state etc.)
1049 head	1969 Z.				T/O @ FAIRBANKS.
					6/8 Ci above
					4/8 St below but above tops.
2009		FL260			Contrailing. in Transit
201130		FL260.	330	66°6'N 149°36'W	8/8 St over mountains.
		T = -50.18			clear skies above
		Td = -68.49			
					Rosmics 2Hz channel
					is u/s. 50Hz on but
					usual noise levels.
202832		FL260.	330	67°30'N 151°12'W	Still contrailing some Ci on horizon
					8/8 St below some veins breaking
					thro tops. T = -69.66°C
					Td = -52.88 ends 12/248
203520					Over Ci clouds 7/8 Ci below
					still contrailing.
204130					Ci cld below is thinning still
					some higher stuff on horizon.
					still 8/8 As over mountains.
204936		FL260			Still contrailing 8/8 St below
					thin Ci on horizon
					climbing to FL280

Mission Scientist's Log CLPX-II

DigiMemo e-Page .....

Flight No **B**.368..... Date ..23/2/03..... Name Tom Truex Page 2 of 5

GMT	Run / Profile	Height	Hdg	GPS Position	Remarks (clouds, weather, visibility, winds, sea state etc.)
~~200736~~					50GHz cavity dropped
~~x~~210000	ish.	Airdrie screencashed.			26GHz channel showing something now
					AMIES backup
210846					old clearing below now
211041	R1	FL280	323	70°68'N 158° 6W.	St Run 1 from Alpha to Bravo
					v. patchy cloud below can see
					surface clearly. Lorran shows
					clear demarkation suggesting dry
					change in moisture.
211252		FL280	332		Sonde 1 Gone
211617		FL280			Over land at Barrow
			346		change of loading. clear below
					+ above still containing.
212563	R1	FL280	341	71°68'N 157°6'W	Sonde 2 Gone. Sonde 1 splashdown.
				72° 6'N, 157° 18'W.	still clear below + above
212654					large land below.
212913					large land below 72°30
					157°22W.
213006					50 GHz channel dropped out
					26 GHz looking ok
213535		FL280			Sonde 2 on ground.
					still clear above + below

Mission Scientist's Log

CLPX-II

DigiMemo e-Page .....

Flight No **B** 368 Date 23/2/08 Name John Taylor Page 3 of 5

GMT	Run / Profile	Height	Hdg	GPS Position	Remarks (clouds, weather, visibility, winds, sea state etc.)
213730		FL280	342		Still clear above + below.
214045	R1	FL280	342	73° 30'N 158° 36'W	Sonde 3 gone still clear above and below.
					Cirrus clear noted large decrease in CO as passed land/seaice boundary at 2115.
215505	R1	FL280	341	76° 58'N 160°W.	Sonde 4 gone still clear above + below.
220058					SL on ground
220509	R1	FL280	344	76° 18'N 161° 18'W	Sonde 5 gone.
					T = -52 Td = -65.
221305					large leads below.
221605	R1	FL280			Interrupt Run 1 for Hdg change
221650	R1.2	FL280	359	77°N 162W	Restart Run 1.2 on new heading
					still clear above + below.
222457	R1.2	FL280	001	78° 18'N 161° 58'W.	Sonde 6 gone
					T = -51 Td = -66.1°C
222520	R1.2	FL280			~~Strt R1~~ End R1.2
222548	P1	FL280↓	003	78°N 162°W.	Strt P1 ↓ to 1000ft
223[illegible]					Interrupt P1 @ 600ft on 1008hPa
224022		1600ft			Restart P1 ↓ on ~~1020~~ 1008hPa

Mission Scientist's Log

C8X-11

DigiMemo e-Page .....

Flight No B378 Date 23/2/08 Name Jon Taylor Page 4 of 5

GMT	Run / Profile	Height	Hdg	GPS Position	Remarks (clouds, weather, visibility, winds, sea state etc.)
224358		12360	187		P1 ↓ on 100hPa heading back along line, prev. outbound track towards transect.
224738	P1↓	8850			into slightly more layer on 100hPa still totally cloud free conditions
					Some ice at 6000ft on ZDC.
225853		5000ft			Ending P1
225900	R2	10000ft	181		1st Run R2 @ 10000ft.
					506Hz channel came back at bottom of profile.
230803	R2	10000ft		over sea	-T = -29°C Td = -28.8°C
232117					Still seeing mode rms at 22-3
					either side of 20 seeing small box of clouds
232300	R2	10000ft			Intercept R2 change Lidar
232331		R2	166		Restart R2
232337		10000ft	169	760hPa 1605CW	Ice crosses from 10→20 & 6/8 in ZDC
					Ice sig temps colder near coast than out to north.
2368					Dis inverted 20 cycle ↓0 no optical Recovery

Mission Scientist's Log

DigiMemo e-Page .....

Flight No **B**.368.. Date ..23/2/08... Name Tom Tarrant Page 5 of 5

GMT	Run / Profile	Height	Hdg	GPS Position	Remarks (clouds, weather, visibility, winds, sea state etc.)
					ZK comes ↑.
235284		100ft	174		Visibility deteriorated again.
					v. short passage to v. low vis.
235716					Excellent VIS.
240010	R2	100ft	170	75°6'N 160°W.	Vis decreasing again optical phenomena back again
241053					Sat passed over large ice floe lead.
241559					over v. rough bitty ice.
241631					Slightly smoother sea ice.
241720					Smoother ice again now T = -30.5K Td = -30.12°C.
	R2	100ft.			End Run 2
					Now do ones grows over pt
					Charlie to overfly ice station.
251906	R3	500ft	057		St Run 3 over Charlie
252009					End R3
252417	R4	500ft	236		St Run 4
222540	R4	500ft.	-		End Run 4
2528					Land

270669

Take off / Start Pipelearn climb out to Faeroes

CLOUD PHYSICS LOG Flight B348

Date: 23/02/08	Operator: KFT	DRS Time: 18:07:00	DAU1 Time: N/A	DAU2 Time: +0	DAU3 Time: +0	Aux1 Time: +0	Aux2 Time: N/A	Page 1 of 1

G.M.T	PCASP		FFSSP	SID1	SID2	2D2-C		2D2-P		CIP25			CIP100			Habit	Remarks
	Conc/cc	Mean R	Block TX	Count	Count	Conc/L	Max size	Conc/m3	Max size	Conc m3	Max size	LWC	Conc m3	Max size	LWC		
																	2DC, 2DP, SID1 only
19:50						noise											
19:52:36				2		2	400	4075	1200							3, 8	FL030
19:53:19				10		1	800	4508	1200							3,8	FL050
19:53:50				2		1	700	1308	1600							3,8	FL060
19:55:16				1		0		0									FL090
19:55:40				0		0		0									FL100
19:56:10				1		3	600	0								3,8	FL110
19:56:48				0		0		0									FL120
19:58:33				8		23	450	216	800							8	FL150
19:59:13				10		1.5	450	7808	800							8	FL160
19:59:52				80		200	400	500	800							8,4	FL170
20:00:20				0		0		0									FL180
20:01:20				20		17	475	2725	400							11,8	FL190
20:02:15				80		100	275	6541	275							11,8	FL200
20:03:10				2		1	450	2666	450							11,4	FL210
20:04:03				0		0.5	650	3991								4	FL220
20:04:40				20		1	650	10775	650							4	FL230
20:05:38				20		3	450	21300	450							4	FL240
20:07																	2DP TOO COLD/NOISY - OFF
21:10:40				0		0											START R1 FL280
21:12:53				1		0											SONDE 1
21:25:48				0		0											SONDE 2
21:34:00				0		0											
21:40:43				0		0											SONDE 3
21:45:00				0		0											
21:50:00				0		0											
21:55:43				0		0											SONDE 4
22:00:00				0		0											
22:05:00				0		0											
22:09:48				0		0											SONDE 5
22:20:00				0		0											
22:24:55				0		0											SONDE 6
22:25:48				0		0											FL280 START P2
22:26:40				0		0											FL270
22:27:36				0		0											FL260
22:28:42				0		0											FL250
22:30:05				0		0											FL240
22:31:18				0		0											FL230
22:32:21				8		0											FL220
22:33:21				0		0											FL210

PCASP Reference Volts = N/A	FFSSP Reference Volts = Not fitted	2D2-C End element 1 voltage = 1.75	CIP25 End element 1 voltage = N/A	CIP100 End element 1 voltage = N/A
PCASP Flow rate = N/A		2D2-C End element 32 voltage =1.0	CIP25 End element 64 voltage = N/A	CIP100 End element 64 voltage = N/A
	SID2 Laser power = Not fitted	2D2-P End element 1 voltage = 3V		

CLOUD PHYSICS LOG Flight B348

Date: 23/02/08	Operator: KFT	DRS Time: 18:07:00	DAU1 Time: N/A	DAU2 Time: +0	DAU3 Time: +0	Aux1 Time: +0	Aux2 Time: N/A	Page 2 of 2

G.M.T	PCASP		FFSSP	SID1	SID2	2D2-C		2D2-P		CIP25			CIP100			Habit	Remarks
	Conc/cc	Mean R	Block TX	Count	Count	Conc/L	Max size	Conc/m3	Max size	Conc m3	Max size	LWC	Conc m3	Max size	LWC		
22:34:20				0		0											FL200
22:35:20				0		0											FL190
22:36:20				0		0											FL180
22:37:23				0		0											FL170
22:38:32				1		0											FL160
22:41:15				0		0											FL150
22:42:18				0		0											FL140
22:43:22				0		0											FL130
22:44:24				1		0											FL120
22:45:27				1		0											FL110
22:46:25				1		0											FL100
22:47:13				0		0											FL090
22:48:09				0		0											FL080
22:49:09				0		0											FL070
22:50:15				1		0											FL060
22:51:28				1		0											FL050
22:52:40				1		0											FL040
22:53:40				1		0											FL030
22:54:40				2		0											FL020
22:55:50				20		0											FL010
22:56:20				30		24	250									6,11	FL005
22:58:00				80		35	200									6,11	
22:59:00				80		42	175									6,11	START R2 100FT AGL
23:01:00				80		18	200									11	
23:04:00				70		2	175									11	Optical phenomenon reported
23:08:00				60		3.5	175									6,11	Optical phenomenon reported
23:10:00				20		20	175									11	Optical phenomenon reported
23:12:00				20		0											Optical phenomenon reported
23:15:00				30		0.5	175									11	Optical phenomenon reported
23:18:00				30		2.5	225									6	Optical phenomenon reported
23:21:00				40		11	200									11	Optical phenomenon reported
23:24:00				30		3	200									11	Optical phenomenon reported
23:27:00				30		18	175									6,11	Optical phenomenon reported
23:30:00				90		67	225									6,11	Optical phenomenon reported
23:33:00				30		9	225									6,11	Optical phenomenon reported
23:40:00				40		8	125									6,11	Optical phenomenon reported
23:42:00				100		70	225									6,11	Optical phenomenon reported
23:44:00				30		15	225									6,11	Optical phenomenon reported
23:47:00				100		183	175									6,11	Optical phenomenon reported
23:50:00				20		0											Vis much improved, no optical phenomenon
23:53:00				200		91	225									6,11	Vis deteriorated again.
23:56:00				90		26	125									11	Vis better
23:58:00				20		0											

PCASP Reference Volts = N/A	FFSSP Reference Volts = Not fitted	2D2-C End element 1 voltage = 1.75	CIP25 End element 1 voltage = N/A	CIP100 End element 1 voltage = N/A
PCASP Flow rate = N/A		2D2-C End element 32 voltage =1.0	CIP25 End element 64 voltage = N/A	CIP100 End element 64 voltage = N/A
	SID2 Laser power = Not fitted	2D2-P End element 1 voltage = 3V		

CLOUD PHYSICS LOG Flight B348

Date: 23/02/08	Operator: KFT	DRS Time: 18:07:00	DAU1 Time: N/A	DAU2 Time: +0	DAU3 Time: +0	Aux1 Time: +0	Aux2 Time: N/A	Page 3 of 3

G.M.T	PCASP		FFSSP	SID1	SID2	2D2-C		2D2-P		CIP25			CIP100			Habit	Remarks
	Conc/cc	Mean R	Block TX	Count	Count	Conc/L	Max size	Conc/m3	Max size	Conc m3	Max size	LWC	Conc m3	Max size	LWC		
24:00:00				80		11	150									11,6	Vis deteriorating.
24:02:00				40		17	250									11	
24:05:00				40		9	250									6,11	
24:09:00				20		1	200									11	
24:14:00				20		3	200									6,11	
24:19:00				20		1	175									6	
24:22:00				40		6	275									11	
24:27:00				20		0											
24:30:00				20		0											
24:35:00				20		3	175									11	
24:40:00				20		0											
24:45:00				20		0											
24:50:00				20		0											
24:55:00				20		0											
25:00:00				20		0											
25:05:00				20		0											
25:10:00				20		0											
25:14:50				20		0											END R2.1 (OVER LAND)
25:19:00				20		0											START R3 500FT TOWARDS POINT C
25:																	

Revision date: 01/04/2008 11:54 AM

CLOUD PHYSICS PROCESSING LOG

Flight number: **B348** **T/O:** 19:49:48
Date of flight: 23/02/08 **Land:** 03:06:39

A) FFSSP PROCESSING NOT FITTED		
Processing Stage	Done?	Comments
1) Transfer *.txt files from DVD to processing PC		
Bnnn_FFSSP_hh.txt for each hour of data Bnnn_FFSSP_HVMS.txt		**hh =** **Last sec processed =**
2) FTP the files (ascii) from the PC to directory PMSDATA: on FLOODS		**File size =**
3) FLOODS> **RUN MRFB:[PMS.FAST_FSSP]FSSP_EXTRACT_TAS** a) Flight number: **Bnnn** b) Path name: **MFDDATA:Bnnn_MFDX** c) Output directory: **PMSDATA:** d) Start time: *0 if unknown (see comment box)* e) End time: *240000 if unknown*		Use time just before/after take-off/landing. If T/O /landing just after/before the hour, ensure start/end time is before/after the hour if there is an FFSSP_hh.txt file for that hour.
4) FLOODS> **RUN MRFB:[PMS.FAST_FSSP]FFSSP_PROCESS_TXT** a) Flight number: **Bnnn** b) Directory: **PMSDATA:** c) TAS in processing: **Y** d) Vel threshold (clicks) **0** e) Calibration file: *Use the most recent calibration file.* Format FFSSP_CALddmmyyyy.txt Calibration files to be stored in MRFB:[PMS.FAST_FSSP] f) Adjust FFSSP time **Y/N** g) If Y, enter value to add to data time (seconds)		**Total glitches =** **Sec file written ok?** **Note calibration file used** Yes only if gross errors occur in FFSSP time eg; ~ 1hour
5) FLOODS> **WAVE** a) WAVE> **write_procffssp_to_m5,'pmsdata:Bnnn_procffssp.dat', 'mfddata:Bnnn_mfdX','pmsdata:Bnnn_m5procffssp',/auto** b) WAVE> **exit**		Use PVWAVE for this section **Note time correction applied to FFSSP by /auto =**
6) FLOODS> **MODIFY** a) Modifying datasets: **pmsdata:Bnnn_m5procffssp** b) Dataset: **mfddata:Bnnn_mfdX** c) New dataset: **mfddata:Bnnn_mfdY (y=x+1)** d) Parameter description file: *leave blank to use default*		**Input file size =** **M5 output file size =**
7) CHECKS: i). Are FFSSP and JW/Nevzorov LWC synchronized in time? *In flight_plot, parameters* *JW LWC para 535* *Nevzorov LWC para 602* *FFSSP LWC para 1202* ii). If not, repeat from step 5b replacing /auto with **addt=x** which adds x+20 secs to FFSSP time.		**Synchronized?**

CLOUD PHYSICS PROCESSING LOG

Flight number: **B348**
Date of Flight: 23/02/08

B) 2D PROCESSING		REPROCESS +1hr
Processing Stage	Done?	Comments
1) Transfer Bnnn.dat file from CD/DVD to PC	Y	
2) Zip up file on PC (Bnnn.zip)	Y	
3) FTP the zipped file (binary) from the PC to the directory SEADAS_DATA:[SEADAS_DATA] on FLOODS	Y	6268
4) Log on to FLOODS		
5) Unzip SEADAS_DATA:[SEADAS_DATA]Bnnn.zip	Y	**Size of Bnnn.dat = 189853**
6) FLOODS> **WAVE**	Y	Use PVWAVE for this section
WAVE> **CONVERT_SEADAS_FILE** a) Input file: **SEADAS_DATA:[SEADAS_DATA]Bnnn.dat** b) Output file: **SEADAS_DATA:[SEADAS_DATA]Bnnn_seadas.dat** WAVE> **exit**		**Blocks read = 49930** **Blocks written = 49930** **Bad reads = 0**
7) FLOODS> **RUN MRFB:[PMS.SEADAS]READM200_FILE**	Y	
a) Default directory: **PMSDATA:** b) Flight number: **Bnnn** c) Disk file name: **SEADAS_DATA:[SEADAS_DATA]Bnnn_seadas.dat** d) Comment string: e) Start time: *0 if unknown (T/O – 5 min)* f) End time: *240000 if unknown (Land + 5 min)* g) Read 2DC: **Y** h) Read 2DP: **Y** i) Secondary data: **Y** j) FSP-SYNC: **Y** k) cmd.str: **Y** l) Auto time correction: **N** m) Full length secondary:**N**		**Start = 00** **End = 253000** Ignore error message scroll (vestigial error from tapes) **Are FRW, FSP, IMB, PCA,SEC files in PMSDATA? Y** **Are they non-zero in size? Y**
8) FLOODS> **WAVE**	Y	2D image display and printing
i). WAVE> **imagedisplay** a) 2D directory name: **PMSDATA:** b) Flight number: **Bnnn** c) File generation no: **0** d) Time from IWC plot: **N** e) Select probe: (**1**) 2DC (**2**) 2DP f) Start time: *As in 7e above* g) End time: *As in 7f above* h) Time interval (sec): **5** recommended (0 for all images)		Must be done from FLOODS itself. **Note any problems with images** **2dc noise until 1957. Last image 2458** **2dp noisy from 2000, switched off from 2007.**
ii). WAVE> **auto_image** a) 2D directory name: **PMSDATA:** b) Flight number: **Bnnn** c) Enter date: **YYYYMMDD** d) Enter start time: *0 if unknown (T/O – 1 min)* e) Enter end time: *240000 if unknown (Land – 1 min)* f) Enter time interval (sec) between successive imaged blocks: **10**	Y	Prepare imagery for Core data From own PC again **Start = 194500** **End = 253000**
iii). WAVE> **exit** to create files		FAAM_YYYYMMDD_R0_
iv). FTP ascii *.PS files from PMSDATA: to PC		Bnnn_2Dx-images.ps
v). Load each into Ghostview or other pdf-converter		Notes on this in instructions
vi). Output as pdf file (720 dpi resolution), appending name prefix of **CORE-CLOUD-PHY**_ to converted files		2dc 22 pages 2dp 11 pages

9) FLOODS> **RUN MRFB:[PMS.SPEC2D.AUTO]PROCESS2D_AUTO** a) Flight number: **Bnnn** b) Directory: **PMSDATA:** c) File generation: *Hit enter* d) Time correction: *Time offset of the 2D data* e) TAS: **Y** f) MFD directory: **MFDDATA:Bnnn_tas** g) Probe number: (**1**) 2DC (**2**) 2DP (**0**) Both *0 unless either probe known to be faulty* h) Start time: *0 if unknown (T/O + 30sec)* i) End time: *240000 if unknown (Land – 30sec)* j) Nominal averaging: **0.2** seconds for conversion to M5 k) Particle type 2DC: **8** if known to be in ice cloud **11** if known to be in water cloud l) Particle type 2DP: **8** if known to be in mixed-phase **8** if unknown m) Coefficient choice: **2** n) Output root filename: **PMSDATA:Bnnn_PROC2D**	Y	NB. an error message may appear, floating point exception, rerun and use time quoted in error message, repeat until successful. **X = b348_tas** **Start = 194500** **End =** 253000 **Time data processed to =** 252848 **2dproc files present? Y** *.2dc, *.2dp and *.dat
10) FLOODS> **WAVE** i) WAVE> **WRITE_PROC2D_TO_M5, 'PMSDATA:BNNN_PROC2D.DAT', 'PMSDATA:BNNN_M5PROC2D'** ii). **exit**	Y	Use PVWAVE for this section Error message about HDDR file should be ignored. **Records = 2657**
11) FLOODS> **MODIFY** a) Modifying datasets: **pmsdata:Bnnn_m5proc2D** b) Datset: **mfddata:Bnnn_tas** c) New dataset: **mfddata:Bnnn_tas_2d** d) Parameter description file: leave blank to use default	Y	 **X = b348_tas** **Y = (X+1) = B348_tas_2d**
12) CHECKS: Are 2DC/2DP IWC of comparable magnitude and well-correlated with Nevzorov TWC? *In flight_plot, parameters* *Nevzerov TWC para 605* *2DC IWC para 1302* *2DP IWC para 1312*	N	**Use flight_plot to check data is present in mfd file? Y**

CLOUD PHYSICS PROCESSING LOG

Flight number: **B348**
Date of Flight: **23/02/08**

C) PCASP PROCESSING		
Processing Stage	Done?	Comments
1) Complete stage 7) in 2D processing Ensures Bnnn_FSP.DAT containing raw PCASP data is written to directory PMSDATA:	**Y**	Note instrument problems This flight so data not Expected to be any use.
2) FLOODS> **RUN MRFB:[PMS.PCASP]PROCPCASP_NEW**	**Y**	
a) Flight number: **Bnnn** b) File name: **PMSDATA:Bnnn_FSP.DAT** c) Root output name: **PMSDATA:Bnnn_PROCPCASP** Produces PMSDATA:Bnnn_PROCPCASP.DAT (binary) PMSDATA:Bnnn_PROCPCASP.OUT (ascii) d) Minimum size channel: *default = 1* *If smallest size channel are known to be noisy the value of the highest noise free channel to be entered here* e) Calibration volume flow rate: *Use the most recent value. (1.15ccs^{-1} Feb 07)* *Calibration files to be stored in **Exeter*** *Entering zero gives default value = 1.0 cm^{3}s^{-1}* f) Time correction: *Same value as used in 2D processing stage 9d* g) Start time: *0 if unknown* h) End time: *240000 if unknown*		New software used **Min size = Not asked** **Vol flow rate =** Not asked Instrument problems this Flight. 194500 253000
3) FLOODS> **WAVE**	**Y**	Use PVWAVE for this section
i).WAVE> **write_procpcasp_to_m5,** **'pmsdata:Bnnn_procpcasp.dat',** **'pmsdata:Bnnn_m5procpcasp'** ii). WAVE> **exit**		
4) FLOODS> **MODIFY** a) Modifying datasets: **pmsdata:Bnnn_m5procpcasp** b) Dataset: **mfddata:Bnnn_tas_2d** c) New dataset: **mfddata:Bnnn_tas_2d_pcasp** d) Parameter description file: *leave blank to use default*	**Y**	 **X = _tas_2d** **Y = X+1 = _tas_2d_pcasp**
5) CHECKS Are PCASP and JW peaks synchronous? *In flight_plot, parameters* *Neph – total blue scatter.* *PCASP conc para 1550*	**N**	 **Is data present in mfd? Y** Use flight_plot to check.

FAAM Dropsonde Flight Log

Flight No.	B348	**Date**	23/02/2008	**Operator**	Doug	**Page No.**	1 of 1

GMT	**Sonde No.**	**Event** *eg land, splashdown*	**Comments** *pressure hPa, T deg C, RH %, wind direction deg, wind speed m/s,* ***longitude, latitude****, height m*
21:12:54	1	Launch	328.70 -56.80 117.28 211.90 17.30 -17.10 **-156.443400 70.996900** 8546.50
21:22:56	1	Land	1035.36 -27.82 72.20 294.68 6.12 -10.45 **-156.350659 71.018612** 514.06
			End drop time override 603.3 RH% to 20 Surface alt unknown ticked
21:25:51	2	Launch	332.80 -31.69 1.17 192.89 33.93 -0.62 **-157.447069 72.183278** 9047.95
21:35:15	2	Land	1035.30 -28.90 68.82 278.87 5.60 -10.88 **-157.316292 72.214378** 554.70
			End drop time override Surface alt unknown ticked
21:40:45	3	Launch	329.00 -53.10 22.17 190.50 11.80 -16.30 **-158.611000 73.586800** 8541.50
21:50:54	3	Land	1033.94 -29.77 69.75 269.03 6.07 -10.30 **-158.443628 73.630096** 587.54
			Surface alt unknown ticked
21:55:45	4	Launch	329.10 -54.10 22.41 194.00 17.50 -15.80 **-159.985300 74.986000** 8539.30
22:05:40	4	Land	1033.01 -30.42 70.17 234.17 5.76 -6.58 **-159.814512 75.036749** 618.26
			End drop time override 594.4 Surface alt unknown ticked
22:09:51	5	Launch	329.10 -52.80 19.46 189.60 22.60 -15.50 **-161.283500 76.348500** 8539.30
22:19:30	5	Land	1029.25 -29.15 999.00 225.97 6.72 -10.02 **-161.094300 76.416296** 649.62
			End drop time override 578.0 Surface alt unknown ticked
22:24:57	6	Launch	329.10 -51.00 14.52 181.90 25.50 -16.20 **-162.001600 77.858200** 8538.00
22:34:48	6	Land	1025.45 -28.50 74.37 211.87 8.90 -10.31 **-161.841919 77.960768** 662.35
			End drop time override 590.0 Surface alt unknown ticked

B348_SWS_SHIMS_EventLog.txt

17:33:24.38	---	-	-	-	-	
17:33:24.41	---	-	-	-	-	+++ SOFTWARE START/RESTART +++
17:33:24.41	---	-	-	-	-	+++ hh:mm:ss.ff / Instr / Posn / Period / tVIS/ tNIR / Comment +++
17:33:24.41	---	-	-	-	-	+++ Flight no. B348
17:33:24.41	---	-	-	-	-	
17:33:42.03	SWS	-	-	-	-	Initialization: VIS OK NIR OK
17:33:44.56	USH	-	-	-	-	Initialization: VIS OK NIR OK
17:33:46.65	LSH	-	-	-	-	Initialization: VIS OK NIR OK
17:33:56.44	SWS	-	-	600	-	VIS int.time changed from 5ms to 600ms.
17:33:57.98	SWS	-	-	-	600	NIR int.time changed from 5ms to 600ms.
17:34:00.28	SWS	-	-	-	-	Manual scene sampling started - Not Recording!
17:34:00.29	LSH	-	-	-	-	Manual scene sampling started - Not Recording!
17:34:00.30	USH	-	-	-	-	Manual scene sampling started - Not Recording!
17:34:17.12	USH	-	-	600	-	VIS int.time changed from 5ms to 600ms.
17:34:21.39	USH	-	-	-	600	NIR int.time changed from 5ms to 600ms.
17:34:28.08	LSH	-	-	600	-	VIS int.time changed from 5ms to 600ms.
17:34:32.28	LSH	-	-	-	600	NIR int.time changed from 5ms to 600ms.
17:34:39.41	---	-	-	-	-	Reset shutters.
17:34:44.81	SWS	-	-	-	-	Dark measurement started.
17:34:45.65	USH	-	-	-	-	Dark measurement started.
17:34:45.67	LSH	-	-	-	-	Dark measurement started.
17:34:51.29	SWS	-	-	-	-	Manual scene sampling started - Not Recording!
17:34:52.11	USH	-	-	-	-	Manual scene sampling started - Not Recording!
17:34:52.33	LSH	-	-	-	-	Manual scene sampling started - Not Recording!
17:45:08.41	---	-	-	-	-	*** box temp +14c
17:45:11.78	USH	-	-	-	-	Dark measurement started.
17:45:11.78	LSH	-	-	-	-	Dark measurement started.
17:45:12.45	SWS	-	-	-	-	Dark measurement started.
17:45:12.64	USH	-	-	-	-	Warning: Abnormally bright dark measurement.
17:45:12.81	LSH	-	-	-	-	Warning: Abnormally bright dark measurement.
17:45:13.27	SWS	-	-	-	-	Warning: Abnormally bright dark measurement.
17:45:18.05	---	-	-	-	-	Reset shutters.
17:45:18.43	USH	-	-	-	-	Manual scene sampling started - Not Recording!
17:45:18.57	LSH	-	-	-	-	Manual scene sampling started - Not Recording!
17:45:19.12	SWS	-	-	-	-	Manual scene sampling started - Not Recording!
17:45:23.62	LSH	-	-	-	-	Dark measurement started.
17:45:24.06	SWS	-	-	-	-	Dark measurement started.
17:45:24.35	USH	-	-	-	-	Dark measurement started.
17:45:30.12	LSH	-	-	-	-	Manual scene sampling started - Not Recording!

```
17:45:30.59  SWS      -     -     -     -  Manual scene sampling started - Not
                                             Recording!
17:45:30.88  USH      -     -     -     -  Manual scene sampling started - Not
                                             Recording!
17:46:32.82  LSH      -     -     -     -  Dark measurement started.
17:46:33.33  SWS      -     -     -     -  Dark measurement started.
17:46:33.56  USH      -     -     -     -  Dark measurement started.
17:46:39.36  LSH      -     -     -     -  Manual scene sampling started - Not
                                             Recording!
17:46:39.83  SWS      -     -     -     -  Manual scene sampling started - Not
                                             Recording!
17:46:40.12  USH      -     -     -     -  Manual scene sampling started - Not
                                             Recording!
18:11:25.19  ---      -     -     -     -  Reset shutters.
18:11:29.31  SWS      -     -     -     -  Dark measurement started.
18:11:30.09  USH      -     -     -     -  Dark measurement started.
18:11:30.15  LSH      -     -     -     -  Dark measurement started.
18:11:35.93  SWS      -     -     -     -  Manual scene sampling started - Not
                                             Recording!
18:11:36.68  USH      -     -     -     -  Manual scene sampling started - Not
                                             Recording!
18:11:36.85  LSH      -     -     -     -  Manual scene sampling started - Not
                                             Recording!
18:11:52.28  ---      -     -     -     -  *** box temp +5c
18:29:07.96  ---      -     -     -     -  Reset shutters.
18:29:13.61  USH      -     -     -     -  Dark measurement started.
18:29:13.66  SWS      -     -     -     -  Dark measurement started.
18:29:14.07  LSH      -     -     -     -  Dark measurement started.
18:29:20.26  USH      -     -     -     -  Manual scene sampling started - Not
                                             Recording!
18:29:20.46  SWS      -     -     -     -  Manual scene sampling started - Not
                                             Recording!
18:29:20.70  LSH      -     -     -     -  Manual scene sampling started - Not
                                             Recording!
18:29:37.38  ---      -     -     -     -  *** box temp +1c
18:29:59.25  USH      -     -     -     -  Manual scene recording started.
18:29:59.49  SWS      -     -     -     -  Manual scene recording started.
18:29:59.68  LSH      -     -     -     -  Manual scene recording started.
18:32:02.02  LSH      -     -     -     -  Idling
18:32:02.03  USH      -     -     -     -  Idling
18:32:02.06  SWS      -     -     -     -  Idling
18:32:05.45  LSH      -     -     -     -  Manual scene sampling started - Not
                                             Recording!
18:32:05.45  USH      -     -     -     -  Manual scene sampling started - Not
                                             Recording!
18:32:05.50  SWS      -     -     -     -  Manual scene sampling started - Not
                                             Recording!
18:40:05.28  SWS      -     -     -     -  ERROR: Failed to initialise
                                             telescope.
18:40:11.46  SWS      -     -     -     -  Telescope disabled.
18:40:47.48  SWS      -     -     -     -  ERROR: Failed to initialise
                                             telescope.
18:40:55.79  SWS      -     -     -     -  Telescope disabled.
18:41:29.48  SWS      -     -     -     -  ERROR: Failed to initialise
                                             telescope.
18:41:34.44  SWS      -     -     -     -  Telescope disabled.
18:41:44.62  USH      -     -     -     -  Idling
18:41:45.51  LSH      -     -     -     -  Idling
18:41:45.56  SWS      -     -     -     -  Idling
18:41:52.90  SWS      -     -     -     -  Instrument closed.
18:41:54.87  USH      -     -     -     -  Instrument closed.
```

18:41:57.31	LSH	-	-	-	-	Instrument closed.
18:42:01.17	---	-	-	-	-	*** SHUTTING DOWN...
18:42:01.30	SWS	-	-	-	-	Telescope motor control quit.
18:42:29.24	---	-	-	-	-	
18:42:29.24	---	-	-	-	-	+++ SOFTWARE START/RESTART +++
18:42:29.24	---	-	-	-	-	+++ hh:mm:ss.ff / Instr / Posn / Period / tVIS/ tNIR / Comment +++
18:42:29.24	---	-	-	-	-	+++ Flight no. B348
18:42:29.25	---	-	-	-	-	
18:42:37.41	SWS	-	-	-	-	Telescope motor initialised.
18:42:49.83	SWS	0.0	-	-	-	Telescope sent to -6.000
18:42:53.10	SWS	-6.0	-	-	-	Telescope sent to 174.000
18:42:54.92	SWS	174.0	-	-	-	Telescope stopped.
18:43:21.74	SWS	174.0	-	-	-	Telescope sent to 116.453
18:43:36.64	SWS	-	-	-	-	Initialization: VIS OK NIR OK
18:43:36.78	USH	-	-	-	-	Initialization: VIS OK NIR OK
18:43:36.87	LSH	-	-	-	-	Initialization: VIS OK NIR OK
18:43:42.85	SWS	-	-	600	-	VIS int.time changed from 5ms to 600ms.
18:43:44.53	SWS	-	-	-	600	NIR int.time changed from 5ms to 600ms.
18:43:47.51	USH	-	-	600	-	VIS int.time changed from 5ms to 600ms.
18:43:48.58	USH	-	-	-	600	NIR int.time changed from 5ms to 600ms.
18:43:51.22	LSH	-	-	600	-	VIS int.time changed from 5ms to 600ms.
18:43:52.86	LSH	-	-	-	600	NIR int.time changed from 5ms to 600ms.
18:44:03.11	SWS	-	-	-	-	Manual scene sampling started - Not Recording!
18:44:03.11	LSH	-	-	-	-	Manual scene sampling started - Not Recording!
18:44:03.12	USH	-	-	-	-	Manual scene sampling started - Not Recording!
18:44:12.90	---	-	-	-	-	Reset shutters.
18:44:18.23	LSH	-	-	-	-	Dark measurement started.
18:44:18.55	USH	-	-	-	-	Dark measurement started.
18:44:18.73	SWS	-	-	-	-	Dark measurement started.
18:44:24.85	LSH	-	-	-	-	Manual scene sampling started - Not Recording!
18:44:25.17	USH	-	-	-	-	Manual scene sampling started - Not Recording!
18:44:25.39	SWS	-	-	-	-	Manual scene sampling started - Not Recording!
18:44:42.43	---	-	-	-	-	*** box temp -1c
19:06:42.23	SWS	116.5	-	-	-	Telescope sent to -6.000
19:06:43.91	SWS	-6.0	-	-	-	Telescope stopped.
19:06:46.09	SWS	-6.0	-	-	-	Telescope sent to 174.000
19:06:47.88	SWS	174.0	-	-	-	Telescope stopped.
19:06:55.56	SWS	174.0	-	-	-	Telescope sent to 117.397
19:06:56.67	SWS	117.4	-	-	-	Telescope stopped.
19:07:06.64	---	-	-	-	-	Reset shutters.
19:07:11.49	USH	-	-	-	-	Dark measurement started.
19:07:12.04	SWS	-	-	-	-	Dark measurement started.
19:07:12.47	LSH	-	-	-	-	Dark measurement started.
19:07:18.09	USH	-	-	-	-	Manual scene sampling started - Not Recording!
19:07:18.60	SWS	-	-	-	-	Manual scene sampling started - Not Recording!

19:07:19.00	LSH	-	-	-	-	Manual scene sampling started - Not Recording!
19:07:48.62	---	-	-	-	-	*** box temp -4c
19:07:59.40	SWS	-	-	200	-	VIS int.time changed from 600ms to 200ms.
19:07:59.41	SWS	-	-	-	200	NIR int.time changed from 600ms to 200ms.
19:08:03.16	USH	-	-	400	-	VIS int.time changed from 600ms to 400ms.
19:08:03.19	USH	-	-	-	400	NIR int.time changed from 600ms to 400ms.
19:08:07.31	LSH	-	-	400	-	VIS int.time changed from 600ms to 400ms.
19:08:07.32	LSH	-	-	-	400	NIR int.time changed from 600ms to 400ms.
19:08:11.21	USH	-	-	-	-	Dark measurement started.
19:08:11.23	LSH	-	-	-	-	Dark measurement started.
19:08:11.32	SWS	-	-	-	-	Dark measurement started.
19:08:14.20	SWS	-	-	-	-	Manual scene sampling started - Not Recording!
19:08:15.75	USH	-	-	-	-	Manual scene sampling started - Not Recording!
19:08:16.03	LSH	-	-	-	-	Manual scene sampling started - Not Recording!
19:08:25.11	SWS	-	-	-	-	Dark measurement started.
19:08:25.44	USH	-	-	-	-	Dark measurement started.
19:08:25.87	LSH	-	-	-	-	Dark measurement started.
19:08:27.72	SWS	-	-	-	-	Manual scene sampling started - Not Recording!
19:08:30.15	USH	-	-	-	-	Manual scene sampling started - Not Recording!
19:08:30.61	LSH	-	-	-	-	Manual scene sampling started - Not Recording!
19:08:47.40	---	-	-	-	-	*** box temp -4c
19:08:52.19	LSH	-	-	-	-	Manual scene recording started.
19:08:52.47	SWS	-	-	-	-	Manual scene recording started.
19:08:52.62	USH	-	-	-	-	Manual scene recording started.
19:09:24.24	SWS	-	-	-	-	Idling
19:09:24.39	USH	-	-	-	-	Idling
19:09:24.43	LSH	-	-	-	-	Idling
19:09:26.63	SWS	-	-	-	-	Manual scene sampling started - Not Recording!
19:09:26.67	LSH	-	-	-	-	Manual scene sampling started - Not Recording!
19:09:26.67	USH	-	-	-	-	Manual scene sampling started - Not Recording!
19:10:46.57	SWS	125.2	-	-	-	Telescope stopped.
19:18:45.26	---	-	-	-	-	*** note faulty telescope position indicator
19:28:06.25	---	-	-	-	-	Reset shutters.
19:28:12.25	LSH	-	-	-	-	Dark measurement started.
19:28:12.65	USH	-	-	-	-	Dark measurement started.
19:28:12.68	SWS	-	-	-	-	Dark measurement started.
19:28:15.44	SWS	-	-	-	-	Manual scene sampling started - Not Recording!
19:28:16.92	LSH	-	-	-	-	Manual scene sampling started - Not Recording!
19:28:17.33	USH	-	-	-	-	Manual scene sampling started - Not Recording!
19:28:27.40	---	-	-	-	-	*** box temp -6c

19:28:37.56	SWS	-	-	100	-	VIS int.time changed from 200ms to 100ms.
19:28:37.57	SWS	-	-	-	100	NIR int.time changed from 200ms to 100ms.
19:28:47.43	USH	-	-	200	-	VIS int.time changed from 400ms to 200ms.
19:28:47.44	USH	-	-	-	200	NIR int.time changed from 400ms to 200ms.
19:28:56.64	LSH	-	-	200	-	VIS int.time changed from 400ms to 200ms.
19:28:56.65	LSH	-	-	-	200	NIR int.time changed from 400ms to 200ms.
19:29:02.00	LSH	-	-	-	-	Dark measurement started.
19:29:02.02	SWS	-	-	-	-	Dark measurement started.
19:29:02.10	USH	-	-	-	-	Dark measurement started.
19:29:03.86	SWS	-	-	-	-	Manual scene sampling started - Not Recording!
19:29:04.64	LSH	-	-	-	-	Manual scene sampling started - Not Recording!
19:29:04.98	USH	-	-	-	-	Manual scene sampling started - Not Recording!
19:44:13.38	---	-	-	-	-	Reset shutters.
19:44:18.41	USH	-	-	-	-	Dark measurement started.
19:44:18.45	SWS	-	-	-	-	Dark measurement started.
19:44:18.80	LSH	-	-	-	-	Dark measurement started.
19:44:18.98	SWS	-	-	-	-	Dark measurement started.
19:44:20.66	SWS	-	-	-	-	Idling
19:44:21.20	USH	-	-	-	-	Manual scene sampling started - Not Recording!
19:44:21.72	LSH	-	-	-	-	Manual scene sampling started - Not Recording!
19:44:27.81	SWS	-	-	-	-	Manual scene recording started.
19:44:31.81	SWS	-	-	-	-	Manual scene sampling started - Not Recording!
19:44:47.90	---	-	-	-	-	*** box temp -7c
19:51:51.49	---	-	-	-	-	*** t/o 194948
19:54:35.31	---	-	-	-	-	Reset shutters.
19:54:40.26	SWS	-	-	-	-	Dark measurement started.
19:54:40.31	LSH	-	-	-	-	Dark measurement started.
19:54:40.70	USH	-	-	-	-	Dark measurement started.
19:54:41.81	SWS	-	-	-	-	Manual scene sampling started - Not Recording!
19:54:43.02	LSH	-	-	-	-	Manual scene sampling started - Not Recording!
19:54:43.25	USH	-	-	-	-	Manual scene sampling started - Not Recording!
19:54:45.17	SWS	-	-	-	-	Manual scene recording started.
19:54:45.41	LSH	-	-	-	-	Manual scene recording started.
19:54:45.65	USH	-	-	-	-	Manual scene recording started.
19:57:15.14	SWS	-	-	-	-	Warning: Clipping may be occurring.
19:57:37.12	SWS	-	-	-	-	Warning: Clipping may be occurring.
19:59:50.00	SWS	125.2	-	-	-	Telescope sent to 174.000
20:00:45.38	SWS	-	-	-	-	Idling
20:00:45.58	LSH	-	-	-	-	Idling
20:00:45.59	USH	-	-	-	-	Idling
20:00:47.31	---	-	-	-	-	Reset shutters.
20:00:51.42	SWS	-	-	-	-	Dark measurement started.
20:00:51.46	LSH	-	-	-	-	Dark measurement started.
20:00:51.46	USH	-	-	-	-	Dark measurement started.
20:00:53.23	SWS	-	-	-	-	Idling
20:00:54.06	LSH	-	-	-	-	Idling

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20:00:54.53  USH      -     -     -     -  Idling
20:00:56.48  LSH      -     -     -     -  Manual scene recording started.
20:00:56.50  USH      -     -     -     -  Manual scene recording started.
20:00:56.53  SWS      -     -     -     -  Manual scene recording started.
20:05:12.07  ---      -     -     -     -  *** box temp -8c
20:12:34.33  ---      -     -     -     -  Reset shutters.
20:12:38.60  USH      -     -     -     -  Dark measurement started.
20:12:38.62  SWS      -     -     -     -  Dark measurement started.
20:12:38.79  LSH      -     -     -     -  Dark measurement started.
20:12:40.50  SWS      -     -     -     -  Manual scene recording started.
20:12:41.36  USH      -     -     -     -  Manual scene recording started.
20:12:41.64  LSH      -     -     -     -  Manual scene recording started.
20:13:05.20  ---      -     -     -     -  *** box temp -9c
20:15:02.96  ---      -     -     -     -  *** solid deck of Sc below
20:23:37.17  ---      -     -     -     -  Reset shutters.
20:23:41.75  SWS      -     -     -     -  Dark measurement started.
20:23:41.78  LSH      -     -     -     -  Dark measurement started.
20:23:41.83  USH      -     -     -     -  Dark measurement started.
20:23:43.27  SWS      -     -     -     -  Manual scene recording started.
20:23:44.53  LSH      -     -     -     -  Manual scene recording started.
20:23:44.79  USH      -     -     -     -  Manual scene recording started.
20:23:56.19  ---      -     -     -     -  *** box temp -9c
20:26:12.80  SWS  125.2     -     -     -  Telescope sent to -6.000
20:26:13.76  SWS      -     -     -     -  Warning: Clipping may be occurring.
20:29:42.09  SWS  125.2     -     -     -  Telescope sent to 174.000
20:29:43.10  SWS      -     -     -     -  Warning: Clipping may be occurring.
20:29:49.00  USH      -     -     -     -  Dark measurement started.
20:29:49.11  LSH      -     -     -     -  Dark measurement started.
20:29:49.19  SWS      -     -     -     -  Dark measurement started.
20:29:51.14  SWS      -     -     -     -  Manual scene recording started.
20:29:52.08  USH      -     -     -     -  Manual scene recording started.
20:29:52.34  LSH      -     -     -     -  Manual scene recording started.
20:33:37.76  ---      -     -     -     -  *** box temp -10c
20:33:50.42  USH      -     -     -     -  Dark measurement started.
20:33:50.43  LSH      -     -     -     -  Dark measurement started.
20:33:50.57  SWS      -     -     -     -  Dark measurement started.
20:33:52.49  SWS      -     -     -     -  Manual scene recording started.
20:33:53.15  USH      -     -     -     -  Manual scene recording started.
20:33:53.25  LSH      -     -     -     -  Manual scene recording started.
20:39:29.03  SWS      -     -     -     -  Dark measurement started.
20:39:29.28  LSH      -     -     -     -  Dark measurement started.
20:39:29.30  USH      -     -     -     -  Dark measurement started.
20:39:30.64  SWS      -     -     -     -  Manual scene recording started.
20:39:31.97  LSH      -     -     -     -  Manual scene recording started.
20:39:32.19  USH      -     -     -     -  Manual scene recording started.
20:39:36.42  SWS  125.2     -     -     -  Telescope sent to -6.000
20:39:37.51  SWS      -     -     -     -  Warning: Clipping may be occurring.
20:39:50.11  ---      -     -     -     -  *** box temp -10c
20:41:53.94  SWS  125.2     -     -     -  Telescope sent to 174.000
20:41:54.83  SWS      -     -     -     -  Warning: Clipping may be occurring.
20:42:00.29  SWS      -     -     -     -  Dark measurement started.
20:42:01.94  SWS      -     -     -     -  Manual scene recording started.
20:54:39.21  ---      -     -     -     -  *** box temp -11c
20:54:43.19  USH      -     -     -     -  Dark measurement started.
20:54:43.26  LSH      -     -     -     -  Dark measurement started.
20:54:43.38  SWS      -     -     -     -  Dark measurement started.
20:54:45.17  SWS      -     -     -     -  Manual scene recording started.
20:54:45.89  USH      -     -     -     -  Manual scene recording started.
20:54:46.15  LSH      -     -     -     -  Manual scene recording started.
21:03:07.29  SWS  125.2     -     -     -  Telescope sent to -6.000
21:03:08.33  SWS      -     -     -     -  Warning: Clipping may be occurring.
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21:03:46.79  SWS  125.2     -     -     -  Telescope sent to 174.000
21:03:47.95  SWS      -     -     -     -  Warning: Clipping may be occurring.
21:04:33.78  ---      -     -     -     -  *** box temp -9c
21:04:43.88  USH      -     -     -     -  Dark measurement started.
21:04:43.96  LSH      -     -     -     -  Dark measurement started.
21:04:43.98  SWS      -     -     -     -  Dark measurement started.
21:04:45.87  SWS      -     -     -     -  Manual scene recording started.
21:04:46.45  USH      -     -     -     -  Manual scene recording started.
21:04:46.66  LSH      -     -     -     -  Manual scene recording started.
21:08:33.82  SWS  125.2     -     -     -  Telescope sent to -6.000
21:08:34.94  SWS      -     -     -     -  Warning: Clipping may be occurring.
21:10:39.92  SWS  125.2     -     -     -  Telescope sent to 174.000
21:10:48.65  ---      -     -     -     -  *** start run 1
21:15:51.25  USH      -     -     -     -  Dark measurement started.
21:15:51.38  LSH      -     -     -     -  Dark measurement started.
21:15:51.50  SWS      -     -     -     -  Dark measurement started.
21:15:53.27  SWS      -     -     -     -  Manual scene recording started.
21:15:53.89  USH      -     -     -     -  Manual scene recording started.
21:15:54.16  LSH      -     -     -     -  Manual scene recording started.
21:20:10.82  SWS  125.2     -     -     -  Telescope sent to -6.000
21:20:11.83  SWS      -     -     -     -  Warning: Clipping may be occurring.
21:21:16.03  SWS  125.2     -     -     -  Telescope sent to 174.000
21:21:17.17  SWS      -     -     -     -  Warning: Clipping may be occurring.
21:21:21.51  USH      -     -     -     -  Dark measurement started.
21:21:21.53  SWS      -     -     -     -  Dark measurement started.
21:21:21.56  LSH      -     -     -     -  Dark measurement started.
21:21:23.24  SWS      -     -     -     -  Manual scene recording started.
21:21:24.04  USH      -     -     -     -  Manual scene recording started.
21:21:24.53  LSH      -     -     -     -  Manual scene recording started.
21:21:47.48  ---      -     -     -     -  *** box temp -10c
21:34:46.47  USH      -     -     -     -  Dark measurement started.
21:34:46.57  LSH      -     -     -     -  Dark measurement started.
21:34:46.59  SWS      -     -     -     -  Dark measurement started.
21:34:48.77  SWS      -     -     -     -  Manual scene recording started.
21:34:49.17  USH      -     -     -     -  Manual scene recording started.
21:34:49.49  LSH      -     -     -     -  Manual scene recording started.
21:34:52.07  SWS  125.2     -     -     -  Telescope sent to -6.000
21:34:53.11  SWS      -     -     -     -  Warning: Clipping may be occurring.
21:36:37.33  SWS  125.2     -     -     -  Telescope sent to 174.000
21:36:38.34  SWS      -     -     -     -  Warning: Clipping may be occurring.
21:40:03.71  SWS      -     -     -     -  Dark measurement started.
21:40:03.90  LSH      -     -     -     -  Dark measurement started.
21:40:03.91  USH      -     -     -     -  Dark measurement started.
21:40:05.77  SWS      -     -     -     -  Manual scene recording started.
21:40:06.78  LSH      -     -     -     -  Manual scene recording started.
21:40:06.83  USH      -     -     -     -  Manual scene recording started.
21:45:47.78  LSH      -     -     -     -  Dark measurement started.
21:45:47.79  USH      -     -     -     -  Dark measurement started.
21:45:47.93  SWS      -     -     -     -  Dark measurement started.
21:45:50.11  SWS      -     -     -     -  Manual scene recording started.
21:45:50.82  LSH      -     -     -     -  Manual scene recording started.
21:45:51.08  USH      -     -     -     -  Manual scene recording started.
21:45:56.80  SWS  125.2     -     -     -  Telescope sent to -6.000
21:45:58.07  SWS      -     -     -     -  Warning: Clipping may be occurring.
21:47:29.35  SWS  125.2     -     -     -  Telescope sent to 174.000
21:47:30.42  SWS      -     -     -     -  Warning: Clipping may be occurring.
21:47:37.28  SWS      -     -     -     -  Dark measurement started.
21:47:37.34  LSH      -     -     -     -  Dark measurement started.
21:47:37.39  USH      -     -     -     -  Dark measurement started.
21:47:39.02  SWS      -     -     -     -  Manual scene recording started.
21:47:40.50  LSH      -     -     -     -  Manual scene recording started.
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21:47:40.52	USH	-	-	-	-	Manual scene recording started.
21:53:18.83	LSH	-	-	-	-	Dark measurement started.
21:53:18.91	SWS	-	-	-	-	Dark measurement started.
21:53:18.99	USH	-	-	-	-	Dark measurement started.
21:53:19.40	LSH	-	-	-	-	Dark measurement started.
21:53:20.83	SWS	-	-	-	-	Manual scene recording started.
21:53:21.97	USH	-	-	-	-	Manual scene recording started.
21:53:22.22	LSH	-	-	-	-	Idling
21:53:44.35	SWS	125.2	-	-	-	Telescope sent to -6.000
21:53:45.45	SWS	-	-	-	-	Warning: Clipping may be occurring.
21:54:01.52	LSH	-	-	-	-	Manual scene recording started.
21:55:15.90	SWS	125.2	-	-	-	Telescope sent to 174.000
21:55:16.82	SWS	-	-	-	-	Warning: Clipping may be occurring.
22:03:38.71	SWS	125.2	-	-	-	Telescope sent to -6.000
22:03:39.86	SWS	-	-	-	-	Warning: Clipping may be occurring.
22:04:54.70	SWS	125.2	-	-	-	Telescope sent to 174.000
22:05:27.34	---	-	-	-	-	Reset shutters.
22:05:31.05	USH	-	-	-	-	Dark measurement started.
22:05:31.07	LSH	-	-	-	-	Dark measurement started.
22:05:31.34	SWS	-	-	-	-	Dark measurement started.
22:05:33.07	SWS	-	-	-	-	Manual scene recording started.
22:05:33.67	USH	-	-	-	-	Manual scene recording started.
22:05:33.93	LSH	-	-	-	-	Manual scene recording started.
22:09:15.24	SWS	125.2	-	-	-	Telescope sent to -6.000
22:09:16.35	SWS	-	-	-	-	Warning: Clipping may be occurring.
22:10:16.91	SWS	125.2	-	-	-	Telescope sent to 174.000
22:10:22.11	SWS	-	-	-	-	Dark measurement started.
22:10:22.14	LSH	-	-	-	-	Dark measurement started.
22:10:22.17	USH	-	-	-	-	Dark measurement started.
22:10:23.67	SWS	-	-	-	-	Manual scene recording started.
22:10:24.85	LSH	-	-	-	-	Manual scene recording started.
22:10:25.14	USH	-	-	-	-	Manual scene recording started.
22:14:58.65	SWS	125.2	-	-	-	Telescope sent to -6.000
22:14:59.67	SWS	-	-	-	-	Warning: Clipping may be occurring.
22:16:19.87	SWS	125.2	-	-	-	Telescope sent to 174.000
22:16:20.94	SWS	-	-	-	-	Warning: Clipping may be occurring.
22:16:29.08	SWS	-	-	-	-	Dark measurement started.
22:16:29.09	USH	-	-	-	-	Dark measurement started.
22:16:29.15	LSH	-	-	-	-	Dark measurement started.
22:16:30.58	SWS	-	-	-	-	Manual scene recording started.
22:16:31.82	USH	-	-	-	-	Manual scene recording started.
22:16:32.08	LSH	-	-	-	-	Manual scene recording started.
22:22:16.03	SWS	125.2	-	-	-	Telescope sent to -6.000
22:22:17.07	SWS	-	-	-	-	Warning: Clipping may be occurring.
22:23:30.28	SWS	125.2	-	-	-	Telescope sent to 174.000
22:23:31.37	SWS	-	-	-	-	Warning: Clipping may be occurring.
22:23:56.68	LSH	-	-	-	-	Dark measurement started.
22:23:56.80	SWS	-	-	-	-	Dark measurement started.
22:23:56.81	USH	-	-	-	-	Dark measurement started.
22:23:57.23	SWS	-	-	-	-	Dark measurement started.
22:23:57.54	USH	-	-	-	-	Dark measurement started.
22:23:58.82	SWS	-	-	-	-	Idling
22:23:59.19	LSH	-	-	-	-	Manual scene recording started.
22:24:00.03	USH	-	-	-	-	Idling
22:24:06.50	USH	-	-	-	-	Manual scene recording started.
22:24:08.35	SWS	-	-	-	-	Manual scene recording started.
22:25:27.01	---	-	-	-	-	*** end run
22:25:49.14	---	-	-	-	-	*** start profile
22:44:14.79	---	-	-	-	-	Reset shutters.
22:44:19.40	SWS	-	-	-	-	Dark measurement started.
22:44:19.43	LSH	-	-	-	-	Dark measurement started.

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22:44:19.55  USH      -     -     -     -  Dark measurement started.
22:44:20.89  SWS      -     -     -     -  Manual scene recording started.
22:44:22.17  LSH      -     -     -     -  Manual scene recording started.
22:44:22.34  USH      -     -     -     -  Manual scene recording started.
22:44:26.58  SWS      -     -   200     -  VIS int.time changed from 100ms to
                                             200ms.
22:44:26.60  SWS      -     -     -   200  NIR int.time changed from 100ms to
                                             200ms.
22:44:30.68  USH      -     -   400     -  VIS int.time changed from 200ms to
                                             400ms.
22:44:30.69  USH      -     -     -   400  NIR int.time changed from 200ms to
                                             400ms.
22:44:34.34  LSH      -     -   400     -  VIS int.time changed from 200ms to
                                             400ms.
22:44:34.36  LSH      -     -     -   400  NIR int.time changed from 200ms to
                                             400ms.
22:44:36.73  LSH      -     -     -     -  Dark measurement started.
22:44:36.75  USH      -     -     -     -  Dark measurement started.
22:44:36.94  SWS      -     -     -     -  Dark measurement started.
22:44:39.65  SWS      -     -     -     -  Manual scene recording started.
22:44:41.26  LSH      -     -     -     -  Manual scene recording started.
22:44:41.43  USH      -     -     -     -  Manual scene recording started.
22:44:57.03  ---      -     -     -     -  *** box temp -11c
22:46:08.58  ---      -     -     -     -  *** box temp -10c
22:46:11.33  USH      -     -     -     -  Dark measurement started.
22:46:11.38  SWS      -     -     -     -  Dark measurement started.
22:46:11.70  LSH      -     -     -     -  Dark measurement started.
22:46:14.03  SWS      -     -     -     -  Manual scene recording started.
22:46:15.85  USH      -     -     -     -  Manual scene recording started.
22:46:16.30  LSH      -     -     -     -  Manual scene recording started.
22:59:04.46  ---      -     -     -     -  *** end profile start run
23:03:17.15  SWS  125.2     -     -     -  Telescope sent to -6.000
23:05:37.52  SWS  125.2     -     -     -  Telescope sent to 174.000
23:05:47.96  ---      -     -     -     -  Reset shutters.
23:05:53.24  USH      -     -     -     -  Dark measurement started.
23:05:53.34  SWS      -     -     -     -  Dark measurement started.
23:05:53.38  LSH      -     -     -     -  Dark measurement started.
23:05:55.99  SWS      -     -     -     -  Manual scene recording started.
23:05:57.74  USH      -     -     -     -  Manual scene recording started.
23:05:58.59  LSH      -     -     -     -  Manual scene recording started.
23:05:59.28  LSH      -     -     -     -  Manual scene recording started.
23:10:27.63  SWS  125.2     -     -     -  Telescope sent to -6.000
23:11:30.81  SWS  125.2     -     -     -  Telescope sent to 174.000
23:15:12.14  ---      -     -     -     -  Reset shutters.
23:15:16.63  SWS      -     -     -     -  Dark measurement started.
23:15:16.69  LSH      -     -     -     -  Dark measurement started.
23:15:16.70  USH      -     -     -     -  Dark measurement started.
23:15:19.15  SWS      -     -     -     -  Manual scene recording started.
23:15:21.35  LSH      -     -     -     -  Manual scene recording started.
23:15:21.50  USH      -     -     -     -  Manual scene recording started.
23:16:10.21  SWS  125.2     -     -     -  Telescope sent to -6.000
23:17:12.38  SWS  125.2     -     -     -  Telescope sent to 174.000
23:21:53.50  SWS  125.2     -     -     -  Telescope sent to -6.000
23:23:02.16  SWS  125.2     -     -     -  Telescope sent to 174.000
23:23:27.29  SWS      -     -     -     -  Dark measurement started.
23:23:27.45  LSH      -     -     -     -  Dark measurement started.
23:23:27.51  USH      -     -     -     -  Dark measurement started.
23:23:29.78  SWS      -     -     -     -  Manual scene recording started.
23:23:32.00  LSH      -     -     -     -  Manual scene recording started.
23:23:32.24  USH      -     -     -     -  Manual scene recording started.
23:23:41.08  ---      -     -     -     -  *** box temp -11c
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23:27:19.06	SWS	125.2	-	-	-	Telescope sent to -6.000
23:28:33.47	SWS	125.2	-	-	-	Telescope sent to 174.000
23:29:50.04	SWS	-	-	-	-	Dark measurement started.
23:29:50.26	LSH	-	-	-	-	Dark measurement started.
23:29:50.32	USH	-	-	-	-	Dark measurement started.
23:29:52.63	SWS	-	-	-	-	Manual scene recording started.
23:29:54.85	LSH	-	-	-	-	Manual scene recording started.
23:29:54.96	USH	-	-	-	-	Manual scene recording started.
23:33:30.28	SWS	125.2	-	-	-	Telescope sent to -6.000
23:35:02.05	SWS	125.2	-	-	-	Telescope sent to 174.000
23:35:07.65	USH	-	-	-	-	Dark measurement started.
23:35:07.79	LSH	-	-	-	-	Dark measurement started.
23:35:07.88	SWS	-	-	-	-	Dark measurement started.
23:35:10.68	SWS	-	-	-	-	Manual scene recording started.
23:35:12.25	USH	-	-	-	-	Manual scene recording started.
23:35:12.95	LSH	-	-	-	-	Manual scene recording started.
23:39:30.22	SWS	125.2	-	-	-	Telescope sent to -6.000
23:40:31.16	SWS	125.2	-	-	-	Telescope sent to 174.000
23:40:37.97	LSH	-	-	-	-	Dark measurement started.
23:40:38.06	USH	-	-	-	-	Dark measurement started.
23:40:38.11	SWS	-	-	-	-	Dark measurement started.
23:40:40.93	SWS	-	-	-	-	Manual scene recording started.
23:40:42.71	USH	-	-	-	-	Manual scene recording started.
23:40:43.00	LSH	-	-	-	-	Manual scene recording started.
23:45:45.42	SWS	125.2	-	-	-	Telescope sent to -6.000
23:46:52.43	SWS	125.2	-	-	-	Telescope sent to 174.000
23:47:03.70	LSH	-	-	-	-	Dark measurement started.
23:47:03.86	SWS	-	-	-	-	Dark measurement started.
23:47:03.93	USH	-	-	-	-	Dark measurement started.
23:47:06.43	SWS	-	-	-	-	Manual scene recording started.
23:47:08.31	LSH	-	-	-	-	Manual scene recording started.
23:47:08.62	USH	-	-	-	-	Manual scene recording started.
23:51:35.53	SWS	125.2	-	-	-	Telescope sent to -6.000
23:52:50.64	SWS	125.2	-	-	-	Telescope sent to 174.000
23:53:47.44	USH	-	-	-	-	Dark measurement started.
23:53:47.54	LSH	-	-	-	-	Dark measurement started.
23:53:47.57	SWS	-	-	-	-	Dark measurement started.
23:53:50.39	SWS	-	-	-	-	Manual scene recording started.
23:53:51.98	USH	-	-	-	-	Manual scene recording started.
23:53:52.17	LSH	-	-	-	-	Manual scene recording started.
23:57:28.94	SWS	125.2	-	-	-	Telescope sent to -6.000
23:58:35.61	SWS	125.2	-	-	-	Telescope sent to 174.000
23:59:13.33	LSH	-	-	-	-	Dark measurement started.
23:59:13.34	USH	-	-	-	-	Dark measurement started.
23:59:13.46	SWS	-	-	-	-	Dark measurement started.
23:59:16.31	SWS	-	-	-	-	Manual scene recording started.
23:59:17.83	LSH	-	-	-	-	Manual scene recording started.
23:59:18.10	USH	-	-	-	-	Manual scene recording started.
00:03:33.67	SWS	125.2	-	-	-	Telescope sent to -6.000
00:04:39.16	SWS	125.2	-	-	-	Telescope sent to 174.000
00:05:02.93	SWS	-	-	-	-	Dark measurement started.
00:05:03.24	USH	-	-	-	-	Dark measurement started.
00:05:03.30	LSH	-	-	-	-	Dark measurement started.
00:05:03.38	SWS	-	-	-	-	Dark measurement started.
00:05:06.19	SWS	-	-	-	-	Idling
00:05:07.76	USH	-	-	-	-	Manual scene recording started.
00:05:07.98	LSH	-	-	-	-	Manual scene recording started.
00:06:18.64	SWS	-	-	-	-	Manual scene recording started.
00:09:17.73	SWS	125.2	-	-	-	Telescope sent to -6.000
00:10:41.56	SWS	125.2	-	-	-	Telescope sent to 174.000
00:10:46.50	SWS	-	-	-	-	Dark measurement started.

00:10:46.56	LSH	-	-	-	-	Dark measurement started.
00:10:46.61	USH	-	-	-	-	Dark measurement started.
00:10:47.56	USH	-	-	-	-	Dark measurement started.
00:10:48.96	SWS	-	-	-	-	Manual scene recording started.
00:10:51.24	LSH	-	-	-	-	Manual scene recording started.
00:10:52.14	USH	-	-	-	-	Idling
00:12:04.89	USH	-	-	-	-	Manual scene recording started.
00:16:24.15	SWS	125.2	-	-	-	Telescope sent to -6.000
00:18:25.04	SWS	125.2	-	-	-	Telescope sent to 174.000
00:18:33.93	SWS	-	-	-	-	Dark measurement started.
00:18:34.00	USH	-	-	-	-	Dark measurement started.
00:18:34.21	LSH	-	-	-	-	Dark measurement started.
00:18:34.39	SWS	-	-	-	-	Dark measurement started.
00:18:37.02	SWS	-	-	-	-	Idling
00:18:38.67	USH	-	-	-	-	Manual scene recording started.
00:18:38.85	LSH	-	-	-	-	Manual scene recording started.
00:18:40.38	SWS	-	-	-	-	Manual scene recording started.
00:21:15.35	SWS	125.2	-	-	-	Telescope sent to -6.000
00:22:16.82	SWS	125.2	-	-	-	Telescope sent to -6.000
00:22:21.57	SWS	125.2	-	-	-	Telescope sent to 174.000
00:22:28.10	SWS	-	-	-	-	Dark measurement started.
00:22:28.27	LSH	-	-	-	-	Dark measurement started.
00:22:28.30	USH	-	-	-	-	Dark measurement started.
00:22:30.58	SWS	-	-	-	-	Manual scene recording started.
00:22:32.83	LSH	-	-	-	-	Manual scene recording started.
00:22:33.05	USH	-	-	-	-	Manual scene recording started.
00:22:37.96	USH	-	-	-	-	Dark measurement started.
00:22:38.07	SWS	-	-	-	-	Dark measurement started.
00:22:38.18	LSH	-	-	-	-	Dark measurement started.
00:22:40.70	SWS	-	-	-	-	Manual scene recording started.
00:22:42.51	USH	-	-	-	-	Manual scene recording started.
00:22:43.02	LSH	-	-	-	-	Manual scene recording started.
00:26:59.43	SWS	125.2	-	-	-	Telescope sent to -6.000
00:28:12.04	SWS	125.2	-	-	-	Telescope sent to 174.000
00:28:24.08	USH	-	-	-	-	Dark measurement started.
00:28:24.18	SWS	-	-	-	-	Dark measurement started.
00:28:24.26	LSH	-	-	-	-	Dark measurement started.
00:28:26.88	SWS	-	-	-	-	Manual scene recording started.
00:28:28.71	USH	-	-	-	-	Manual scene recording started.
00:28:29.18	LSH	-	-	-	-	Manual scene recording started.
00:32:59.86	SWS	125.2	-	-	-	Telescope sent to -6.000
00:34:30.59	SWS	125.2	-	-	-	Telescope sent to 174.000
00:34:59.08	SWS	-	-	-	-	Dark measurement started.
00:34:59.18	LSH	-	-	-	-	Dark measurement started.
00:34:59.23	USH	-	-	-	-	Dark measurement started.
00:35:01.65	SWS	-	-	-	-	Manual scene recording started.
00:35:03.87	LSH	-	-	-	-	Manual scene recording started.
00:35:04.07	USH	-	-	-	-	Manual scene recording started.
00:38:55.92	SWS	125.2	-	-	-	Telescope sent to -6.000
00:40:03.31	SWS	125.2	-	-	-	Telescope sent to 174.000
00:44:54.79	SWS	125.2	-	-	-	Telescope sent to -6.000
00:45:59.53	SWS	125.2	-	-	-	Telescope sent to 174.000
00:50:55.93	SWS	125.2	-	-	-	Telescope sent to -6.000
00:52:00.85	SWS	125.2	-	-	-	Telescope sent to 174.000
00:53:04.42	SWS	-	-	-	-	Dark measurement started.
00:53:04.55	USH	-	-	-	-	Dark measurement started.
00:53:04.60	LSH	-	-	-	-	Dark measurement started.
00:53:06.96	SWS	-	-	-	-	Manual scene recording started.
00:53:09.22	USH	-	-	-	-	Manual scene recording started.
00:53:09.37	LSH	-	-	-	-	Manual scene recording started.
00:58:32.75	SWS	125.2	-	-	-	Telescope sent to -6.000

00:59:42.30	SWS	125.2	-	-	-	Telescope sent to 174.000
00:59:48.91	SWS	-	-	-	-	Dark measurement started.
00:59:49.29	LSH	-	-	-	-	Dark measurement started.
00:59:49.32	USH	-	-	-	-	Dark measurement started.
00:59:51.43	SWS	-	-	-	-	Manual scene recording started.
00:59:53.83	LSH	-	-	-	-	Manual scene recording started.
00:59:54.08	USH	-	-	-	-	Manual scene recording started.
01:04:01.64	SWS	125.2	-	-	-	Telescope sent to -6.000
01:05:10.21	SWS	125.2	-	-	-	Telescope sent to 174.000
01:11:17.21	USH	-	-	-	-	Dark measurement started.
01:11:17.28	LSH	-	-	-	-	Dark measurement started.
01:11:17.33	SWS	-	-	-	-	Dark measurement started.
01:11:20.28	SWS	-	-	-	-	Manual scene recording started.
01:11:21.81	USH	-	-	-	-	Manual scene recording started.
01:11:21.95	LSH	-	-	-	-	Manual scene recording started.
01:11:27.39	SWS	-	-	100	-	VIS int.time changed from 200ms to 100ms.
01:11:27.41	SWS	-	-	-	100	NIR int.time changed from 200ms to 100ms.
01:11:30.36	SWS	-	-	-	-	Dark measurement started.
01:11:31.84	SWS	-	-	-	-	Manual scene recording started.
01:11:35.92	SWS	-	100	-	-	Sample period changed from 250ms to 100ms.
01:14:53.54	---	-	-	-	-	*** end run
01:14:58.09	SWS	-	-	-	-	Dark measurement started.
01:14:58.38	LSH	-	-	-	-	Dark measurement started.
01:14:58.50	USH	-	-	-	-	Dark measurement started.
01:14:59.68	SWS	-	-	-	-	Manual scene recording started.
01:15:02.96	LSH	-	-	-	-	Manual scene recording started.
01:15:03.15	USH	-	-	-	-	Manual scene recording started.
01:15:05.38	SWS	-	250	-	-	Sample period changed from 100ms to 250ms.
01:19:09.11	---	-	-	-	-	*** start run
01:20:21.71	---	-	-	-	-	*** end run
01:20:33.58	---	-	-	-	-	*** box temp -11
01:20:37.63	USH	-	-	-	-	Dark measurement started.
01:20:37.70	SWS	-	-	-	-	Dark measurement started.
01:20:37.79	LSH	-	-	-	-	Dark measurement started.
01:20:39.35	SWS	-	-	-	-	Manual scene recording started.
01:20:42.17	USH	-	-	-	-	Manual scene recording started.
01:20:42.66	LSH	-	-	-	-	Manual scene recording started.
01:24:20.92	---	-	-	-	-	*** start run
01:25:48.12	---	-	-	-	-	*** end run
01:34:28.12	---	-	-	-	-	*** land Barrow 012854
01:34:30.61	SWS	-	-	-	-	Dark measurement started.
01:34:30.69	LSH	-	-	-	-	Dark measurement started.
01:34:30.71	USH	-	-	-	-	Dark measurement started.
01:34:32.12	SWS	-	-	-	-	Manual scene recording started.
01:34:35.36	LSH	-	-	-	-	Manual scene recording started.
01:34:35.63	USH	-	-	-	-	Manual scene recording started.
01:34:39.83	LSH	-	-	-	-	Idling
01:34:39.89	SWS	-	-	-	-	Idling
01:34:40.11	USH	-	-	-	-	Idling
01:34:45.12	SWS	-	-	-	-	Instrument closed.
01:34:47.19	USH	-	-	-	-	Instrument closed.
01:34:48.79	LSH	-	-	-	-	Instrument closed.
01:34:58.35	SWS	-	-	-	-	Telescope disabled.
01:35:01.33	---	-	-	-	-	*** SHUTTING DOWN...
01:35:01.37	SWS	-	-	-	-	Telescope motor control quit.
02:55:49.44	---	-	-	-	-	
02:55:49.44	---	-	-	-	-	+++ SOFTWARE START/RESTART +++

02:55:49.44	---	-	-	-	-	+++ hh:mm:ss.ff / Instr / Posn / Period / tVIS/ tNIR / Comment +++
02:55:49.44	---	-	-	-	-	+++ Flight no. B348
02:55:49.44	---	-	-	-	-	
02:56:03.22	SWS	-	-	-	-	Initialization: VIS OK NIR OK
02:56:03.31	USH	-	-	-	-	Initialization: VIS OK NIR OK
02:56:03.40	LSH	-	-	-	-	Initialization: VIS OK NIR OK
02:56:20.52	SWS	-	-	600	-	VIS int.time changed from 5ms to 600ms.
02:56:22.92	SWS	-	-	-	600	NIR int.time changed from 5ms to 600ms.
02:56:25.82	USH	-	-	600	-	VIS int.time changed from 5ms to 600ms.
02:56:27.73	USH	-	-	-	600	NIR int.time changed from 5ms to 600ms.
02:56:30.87	LSH	-	-	600	-	VIS int.time changed from 5ms to 600ms.
02:56:33.00	LSH	-	-	-	600	NIR int.time changed from 5ms to 600ms.
02:56:52.77	SWS	-	-	-	-	Manual scene sampling started - Not Recording!
02:56:52.78	LSH	-	-	-	-	Manual scene sampling started - Not Recording!
02:56:52.78	USH	-	-	-	-	Manual scene sampling started - Not Recording!
02:57:03.40	SWS	-	-	-	-	Telescope motor initialised.
02:57:10.59	SWS	-0.0	-	-	-	Telescope sent to 174.000
02:57:12.25	SWS	173.3	-	-	-	Telescope stopped.
02:57:22.65	SWS	-	-	-	-	Dark measurement started.
02:57:22.91	LSH	-	-	-	-	Dark measurement started.
02:57:23.18	USH	-	-	-	-	Dark measurement started.
02:57:23.47	SWS	-	-	-	-	Warning: Abnormally bright dark measurement.
02:57:23.73	LSH	-	-	-	-	Warning: Abnormally bright dark measurement.
02:57:24.01	USH	-	-	-	-	Warning: Abnormally bright dark measurement.
02:57:27.96	---	-	-	-	-	Reset shutters.
02:57:29.10	SWS	-	-	-	-	Manual scene sampling started - Not Recording!
02:57:29.35	LSH	-	-	-	-	Manual scene sampling started - Not Recording!
02:57:29.63	USH	-	-	-	-	Manual scene sampling started - Not Recording!
02:57:32.40	USH	-	-	-	-	Dark measurement started.
02:57:32.75	SWS	-	-	-	-	Dark measurement started.
02:57:33.13	LSH	-	-	-	-	Dark measurement started.
02:57:38.84	USH	-	-	-	-	Manual scene sampling started - Not Recording!
02:57:39.17	SWS	-	-	-	-	Manual scene sampling started - Not Recording!
02:57:39.56	LSH	-	-	-	-	Manual scene sampling started - Not Recording!
02:58:11.01	---	-	-	-	-	*** box temp -5c
03:00:29.64	SWS	125.3	-	-	-	Telescope stopped.
03:01:27.74	SWS	174.0	-	-	-	Telescope sent to -6.000
03:01:29.87	SWS	-6.0	-	-	-	Telescope stopped.
03:01:32.28	SWS	-6.0	-	-	-	Telescope sent to 174.000
03:01:34.39	SWS	174.0	-	-	-	Telescope stopped.
03:01:36.29	---	-	-	-	-	Reset shutters.
03:01:39.98	SWS	-	-	-	-	Dark measurement started.

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03:01:40.01  USH      -     -     -     -  Dark measurement started.
03:01:40.01  LSH      -     -     -     -  Dark measurement started.
03:01:46.42  SWS      -     -     -     -  Manual scene sampling started - Not
                                             Recording!
03:01:46.62  USH      -     -     -     -  Manual scene sampling started - Not
                                             Recording!
03:01:46.82  LSH      -     -     -     -  Manual scene sampling started - Not
                                             Recording!
03:01:49.07  USH      -     -     -     -  Manual scene recording started.
03:01:49.27  LSH      -     -     -     -  Manual scene recording started.
03:01:50.00  SWS      -     -     -     -  Manual scene recording started.
03:08:26.26  ---      -     -     -     -  *** t/o Barrow 030641
03:12:37.83  ---      -     -     -     -  *** box temp -6
03:12:42.37  SWS      -     -     -     -  Dark measurement started.
03:12:42.38  LSH      -     -     -     -  Dark measurement started.
03:12:42.42  USH      -     -     -     -  Dark measurement started.
03:12:43.20  SWS      -     -     -     -  Warning: Abnormally bright dark
                                             measurement.
03:12:43.41  LSH      -     -     -     -  Warning: Abnormally bright dark
                                             measurement.
03:12:43.60  USH      -     -     -     -  Warning: Abnormally bright dark
                                             measurement.
03:12:47.27  ---      -     -     -     -  Reset shutters.
03:12:48.83  SWS      -     -     -     -  Manual scene recording started.
03:12:49.03  LSH      -     -     -     -  Manual scene recording started.
03:12:49.23  USH      -     -     -     -  Manual scene recording started.
03:12:51.34  LSH      -     -     -     -  Dark measurement started.
03:12:51.54  USH      -     -     -     -  Dark measurement started.
03:12:51.58  SWS      -     -     -     -  Dark measurement started.
03:12:57.81  LSH      -     -     -     -  Manual scene recording started.
03:12:58.00  USH      -     -     -     -  Manual scene recording started.
03:12:58.21  SWS      -     -     -     -  Manual scene recording started.
03:18:49.85  USH      -     -     -     -  Dark measurement started.
03:18:49.88  SWS      -     -     -     -  Dark measurement started.
03:18:49.92  LSH      -     -     -     -  Dark measurement started.
03:18:56.29  USH      -     -     -     -  Manual scene recording started.
03:18:56.53  SWS      -     -     -     -  Manual scene recording started.
03:18:56.69  LSH      -     -     -     -  Manual scene recording started.
03:35:42.70  ---      -     -     -     -  *** end profile
03:36:20.10  ---      -     -     -     -  *** end science
03:36:24.56  ---      -     -     -     -  Reset shutters.
03:36:29.98  LSH      -     -     -     -  Dark measurement started.
03:36:30.28  SWS      -     -     -     -  Dark measurement started.
03:36:30.30  USH      -     -     -     -  Dark measurement started.
03:36:36.44  LSH      -     -     -     -  Manual scene recording started.
03:36:36.75  SWS      -     -     -     -  Manual scene recording started.
03:36:36.95  USH      -     -     -     -  Manual scene recording started.
03:36:53.29  ---      -     -     -     -  *** box temp -9c
03:37:13.32  USH      -     -     -     -  Idling
03:37:13.43  LSH      -     -     -     -  Idling
03:37:13.75  SWS      -     -     -     -  Idling
03:37:18.58  SWS      -     -     -     -  Instrument closed.
03:37:20.30  USH      -     -     -     -  Instrument closed.
03:37:21.73  LSH      -     -     -     -  Instrument closed.
03:37:25.28  SWS      -     -     -     -  ERROR: Could not disable telescope.
03:37:33.69  ---      -     -     -     -  *** SHUTTING DOWN...
03:37:33.85  SWS      -     -     -     -  Telescope motor control quit.
```

ARIES flight log

Flight: B348	page 1 of
Date: 23/02/08	Operator(s): doss	Res: 1	Gain A: 2 B: 2
Loc./Notes:	

Scans: *either "[IGMs]X[co-adds]", or "[stop DRS time]" if in start/stop, or "[macro name]".* ***View:*** *mirror angle.*

DRS time	Flt ptrn	Scans	View	Shtr	HBB	CBB	Comments
172444	Gnd		Ascii Housekeeping started				
~~182445~~	~~Gnd~~			Cbd			
182602	Gnd.	1/120		Osd	7099	32.05	HBB cal
182722	Gnd.	1/120		Cbd	7117	32.05	CBB cal.
192003	Gnd.	HBB	Noise Check.				script.
2003	Trans+	HBB	Noise Check				script
200648	Trans+	Cal script			7064	20.46	
203000	Trans+	1/120	CBB	Osd.	7067	22.38	
203728	Trans+	1/120	HBB	Osd	7085	22.89	
204426	Trans+	Cal script			7082	21.46	
204548	Trans+	520/1	Zen	open			
5045	Trans+	CW	Script				
		Strange integer terms. — gentle slopes on HBB val					
		will restart software.					
75517		stopped housekeeping					
		No housekeeping data after software reboo-					
		Rebooted Interferometer					
		Rebooted PC.					
210439		Restored all software ok finally					
211038		Cal script		Osd	2247	7065	hopefully CBB has settled enough
211208	R1	520/1	Nad	Osd	7074	22.39	FL280
211638	R1	Cal script		Osd	7066	21.92	
211814	R1	240/1	Nad	Osd	7098		
212020	R1	120/1	Zen	open			
212140	R1	120/1	Nad	Osd	7101	22.25	
212249	R1	1/120	HBB	Osd			- funny shape to channel 1
212400	R1	1/120	CBB	Osd	7074	22.35	
212443	R1	520/1	Nad	Osd	7078	22.09	
212908	R1	CW	Script		7094	22.32	
213050	R1	400/1	Nad				
	R1	CW	Script				

ARIES flight log

Flight: 02/22/ | page 2 of

Date: 23/2/07 | Operator(s): JOSS | Res: 1 | Gain A: 2 B: 2

Loc./Notes: CLPX II IASI flight Norway Barrow

Scans: either "[IGMs]X[co-adds]", or "[stop DRS time]" if in start/stop, or "[macro name]". View: mirror angle.

DRS time	Flt ptrn	Scans	View	Shtr	HBB	CBB	Comments
213430	R1	CALSCR	NT		7077	2236	
213534	R1	120/1	Zen	open	7064	21.46	
213645	R1	520/1	Nad	Clsd	7092	22.56	
214120	R1	CalScript			7080	22.84	
214241	R1	360/1	Nad				
214548	R1	120/1	Zen	open	7058	22.17	
214653	R1	CalScript	Clsd		7035	22.6	
214816	R1	520/1	Nad	Clsd	7061	21.71	
215245	R1	CalScript					
215401	R1	120/1	Zen	open	7065	22.26	
215510	R1	360/1	Nad	Clsd	7087	22.75	
215815	R1	CalScript	Clsd		7097	22.47	
215932	R1	520/1	Nad	Clsd	7061	22.33	shutter
220322	R1	120/1	Zen	open	7018	22.59	open @ 0355
220430	R1	CalScript	Clsd		7120	22.13	
220548	R1	400/1	Nad	Clsd	7088	22.15	
220912	R1	120/1	Zen				
221017	R1	CalScript	Clsd		7059	21.96	
221138	R1	400/1	Nad	Clsd	7079	23.01	
221507	R1	120/1	Zen	open	7071	22.83	
221610	R1	CalScript	Clsd		7075	21.98	
221732	R1-1	400/1	Nad	Clsd	7078	22.36	
222102	R1-1	CalScript	Clsd		7049	21.92	
222216	R1-1	120/1	Zen	open	7055	22.69	
222327	R1-1	400/1	Nad	Clsd	7091	22.38	
222529	R1-1	CalScript	Clsd		7088	21.14	
225700	R2	CalScript	Clsd		7102	22.18	
225858	R2	400/1	Nad	Clsd	2208	71.31	100
230259	R2	CalScript	Clsd		7094	21.77	
230416	R2	120/1	Zen	open	7103	2217	
230525	R2	400/1	Nad	Clsd	7095	2196	

ARIES flight log

Flight: RS348 | **page** 3 **of**

Date: 23/2/08 | **Operator(s):** JOSS | **Res:** 1 | **Gain A:** 2 **B:** 2

Loc./Notes: CRX II

Scans: *either "[IGMs]X[co-adds]", or "[stop DRS time]" if in start/stop, or "[macro name]".* ***View:*** *mirror angle.*

DRS time	Flt ptrn	Scans	View	Shtr	HBB	CBB	Comments
230858	R2	CalScript	Zen	open	71.04	23.05	
231105	R2	120/1	Zen	open	70.92	21.87	
231124	R2	400/1	Nod	Clsd	70.82	22.43	
231444	R2	CalScript			71.27	23.36	
231608	R2	120/1	Zen	open	70.64	22.90	
231715	R2	400/1	Nod	Clsd	71.20	22.34	
232046	R2	CalScript		Clsd	70.68	22.43	
232156	R2	120/1	Zen	open	70.42	21.45	
222331	R2-1	300/1	Nod	Clsd	71.29	22.87	
222608	R2-1	CalScript		Clsd	70.86	21.88	
222730	R2-1	120/1	Zen	open	70.94	22.08	
222816	R2-1	120/1	Zen	open	70.96	22.21	
222925	R2-1	366/1	Nod	Clsd	71.1	22.55	
223227	R2-1	CalScript		Clsd	70.77	22.63	
223346	R2-1	120/1	Zen	open	70.68	22.58	
223455	R2-1	400/1	Nod	Clsd	71.43	22.17	
223818	Cal	Script		Clsd	70.91	21.4	
223935	R2-1	120/1	Zen	open	71.03	22.00	
224059	R2-1	400/1	Nod	Clsd	71.1	22.46	
224425	Cal	Script		Clsd	70.91	22.37	
224543	R2-1	120/1	Zen	open	70.95	21.84	
224657	R2-1	400/1	Nod	Clsd			
225014	Cal	Script		Clsd	70.74	21.81	
225139	R2-1	120/1	Zen	open	70.80	22.14	
225250	R2-1	400/1	Nod	Clsd	70.84	22.34	
225613	R2-1	CalScript		Clsd	70.81	21.92	
225734	R2-1	120/1	Zen	open	70.67	21.71	
225844	R2-1	400/1	Nod	Clsd	71.05	22.3	
220209	R2-1	CalScript		Clsd	70.86	21.82	
220326	R2-1	120/1	Zen	Open	70.89	22.11	

ARIES flight log

Flight: B348 | page 4 of

Date: 23/2/08 | Operator(s): Joss | Res: 1 | Gain A: 2 B: 2

Loc./Notes: Alaska. CLPX II

Scans: either "[IGMs]X[co-adds]", or "[stop DRS time]" if in start/stop, or "[macro name]". View: mirror angle.

DRS time	Flt ptrn	Scans	View	Shtr	HBB	CBB	Comments
000445	R2-1	400/1	Nad	clsd	70.86	22.66	
000801			Calscript				
000921	R4	120/1	Zen	opn			
001045	R2-1	400/1	Nad	clsd	70.86	22.84	– switched ARIES off by mistake! Sorry.
			Rebooted everything!				
001635	R2-1	400/1	Nad	clsd	77.4	36.9	Runway to let calramps settle
001956	R2-1	Calscript		clsd	71.38	29.64	Set CBB to 30°C
002115	R2-1	120/1	Zen	open	70.86	29.72	
002233	R2-1	400/1	Nad	clsd	70.79	30.87	
002557	R2-1	Calscript		clsd	71.13	30.56	
002712	R2.1	120/1	Zen	open	70.89	29.82	
002844	R2.1	400/1	Nad	clsd	70.86	30.86	
003148	R2-1	Calscript		clsd	70.30	30.23	
003305	R2-1	120/1	Zen	open	70.88	30.14	
003415	R2.1	400/1	Nad	clsd	70.61	30.54	
003743	R2-1	Calscript		clsd	70.77	30.59	
003859	R2-1	120/1	Zen	open	70.82	29.88	
004016	R2-1	400/1	Nad	clsd	71.24	30.16	
004338	R2-1	Calscript		clsd	71.06	30.86	
004457	R2-1	120/1	Zen	open	70.90	30.09	
004609	R2-1	400/1	Nad	clsd	70.96	30.21	
004943	R2-1	Calscript		clsd	71.06	31.02	
005055	R2-1	120/1	Zen	open	70.89	30.45	
005246	R2.1	400/1	Nad	clsd	70.99	30.43	
005346	R2.1						
005709	R2.1	Calscript		clsd	71.04	30.62	–
005819	R2-1	120/1	Zen	open	71.03	29.81	opened shutter lower
005928	R2-1	400/1	Nad	clsd	71.05	30.85	
010052	R2-1	Calscript		clsd	71.03	31.50	
010409	R2-1	120/1	Zen	open	70.70	30.4	

ARIES flight log

Flight: B348 **page** 5 **of**

Date: 23/2/06 **Operator(s):** Joss **Res:** 1 **Gain A:** 2B2

Loc./Notes:

Scans: *either "[IGMs]X[co-adds]", or "[stop DRS time]" if in start/stop, or "[macro name]".* ***View:*** *mirror angle.*

DRS time	Flt ptrn	Scans	View	Shtr	HBB	CBB	Comments
010524	R2-1	400/1	Nad	Osd	7087	30.23	
010851	R2-1	Calscript	Nad	Osd	7101	30.12	
011013	R2-1	520/1	Nad	Osd	7088	3043	Rem Into Coad
011450	R2-1	Cal Script			7104	3020	
	R3-1	400/1	Nad	Osd			Didn't get start line.
012030	R3-1	~~Coad~~	Cal Script				
012420	R3-1	400/1	Nad	Osd	7129	30.74	
012548	R3-1	Calscript			7060	92.84	

Microwave Radiometers FLIGHT LOG	Date	23/02/08	Flight	B348	log pages	2

Operator(s)	Pollard	Campaign	CLPX-II
Departure	Fairbanks	Arrival	Fairbanks

System start

MARSS

Visual pod inspection						X
Close 3 SSP circuit breakers						X
Close all MARSS circuit breakers						X
FERA on				at time	17:27	
Temperature controller initial temps	Ch16	17.4°C	Ch 17	17.3°C	Ch18	16.8°C
Temperature controller set points		50°C		50°C	-20	40°C
MARSS CPU on				at time	17:34	
Initial target temperatures	Hot	289.1		Cold	289.4	
Target heating						X
*** CHECK SCAN HEAD CLEAR ***						X
Scanning on (LMD box)				at time	17:36	
Scan indication		Monitor	›		Visual	X

Deimos

Close all Deimos circuit breakers						X
Turn on Deimos CPU						X
*** CHECK SCAN HEAD CLEAR ***						X
Start Deimos Software				at time	17:27	
Initial target temperatures	Hot	289.3		Cold	289.8	
Target heating						X
Scan indication		Monitor	›		Visual	X
Weather	Cloud			Precip		
	Surface			Pressure		
	Other					

System functionality check

(after initial system warmup, approx 1 hour)

PC to DRS Time error	$t_{PC}=t_{DRS}$ +			at time		
Brightness temps 'sensible'						
Target temps	MARSS:	Hot	344.57	Cold	290.06	
	Deimos:	Hot	344.49	Cold	300.8	

Channel gains 'sensible'	Ch1 A (-)	Ch3 A (-)	Ch1 B (-)	Ch3 B (-)	
	0	34.74	0	35.52	
	Ch16 (40-44)	Ch17 (45-49)	Ch18 (40-44)	Ch19 (40-44)	Ch20 (44-48)
	41.49	35.01	40.28	42.44	42.79

Power changeover

Headset on before start		
Listen to engine start sequence	4, 3, 2, 1.	
LMD off (3 switches, bottom to top)		
Exit Deimos Software (x)		
POWER CHANGEOVER		
LMD on (3 switches, top to bottom)	then pushbutton	
Restart Deimos Software		
System running again		at time

Flight #	B348	Date	23/02/08	Operator(s)	Pollard	log page	2	of	2

Time	**Run id**	**Alt/FL**	*Remarks*	**Sys**
			At 18:08:15 Deimos 24GHz channel(s) appear to have gone open circuit, unable to recover.	
20:00			Swing Lo! Sweet Chariot!	
			Still no 24 GHz everything else looking good.	
20:24			Ch20 stoped following other 183 chs and started to look like window chs in nadir, poss as mountains rose up	
			At some point 24GHz chans came back, shortly followed by 50 GHz going tits up!	
22:48			MARSS clock reset, was 3 s fast	
			Deimos clock ok	
23:00			50GHz came live near bottom of profile.	
01:35			MARSS and Deimos shut down, Clock errors not noted.	

CVI log

2/23/08	5:31:34 PM	B348 CLPX-II
2/23/08	8:18:43 PM	The hygro was zeroed on the ground using the diluent air, but no pressure pump. The signal level at fl240 is around -0.6 .
2/23/08	8:19:29 PM	Hygro zeroed aT FL240
2/23/08	8:31:08 PM	Diluent level reduced to 0
2/23/08	8:32:22 PM	Flow leves on PCASP inreased to account for altitude.
2/23/08	9:11:20 PM	Start of run 1 at fl280
2/23/08	10:25:37 PM	End of run 1
2/23/08	10:26:03 PM	Decent to 1000 ft

Flight: B348

KEY

- Not Fitted
- Fitted, Not Operated
- Duff Data
- Minor Problems
- OK

Thermometers
- Cabin Temperature:
- Heimann:
- Deiced Temp:
- Non-deiced Temp:

Hygrometers
- FWVS:
- General Eastern:
- Johnson Williams:
- Nevzorov:
- Total Water Probe:

Cameras
- Downward Facing:
- Forward Facing:
- Rearward Facing:
- Upward Facing:

Navigation + Aircraft
- Cruciform GPS:
- GIN Applanix:
- INU Honeywell:
- Radar Altimeter:
- RVSM IAS:
- RVSM Static Pressure:
- XR5 GPS:

Report Created 12/03/2008 15:07:58

Misc Core
- AMTG:
- AVAPS:
- Cabin Pressure:
- Fax machine:
- Printer:
- S9 Static Pressure:
- Satcom C:
- Satcom H:
- Turb Centre-Static:
- Turb Left Right:
- Turb Up-Down:
- Turb Horizontal Chk:
- Turb Vertical Chk:
- Weather Radar:

DLUs:
- DLU AERACK:
- DLU BBR Lower:
- DLU BBR Upper:
- DLU Core Chem:
- DLU Core Consoles:
- DLU Port Aft:
- DLU Port Fwd:
- DLU Stbd Fwd:

Radiometers
Lower:
- BBR (clear) Lower:
- BBR (IR) Lower:
- BBR (red) Lower:

Upper:
- BBR (clear) Upper:
- BBR (IR) Upper:
- BBR (red) Upper:

- ARIES:
- DEIMOS:
- IR Camera:
- JNO2 Lower:
- JNO2 Upper:
- JO1D Lower:
- JO1D Upper:
- MARSS:
- SHIMS Lower:
- SHIMS Upper:
- SWS:
- TAFTS:

Last Updated:

27/02/2008 02:17:51

Cloud Probes
- 2DC:
- 2DP:
- FFSSP:
- PCASP:
- 2DS:
- ADA:
- CAPS:
- CCN:
- CDP:
- CIP 100:
- CIP 25:
- CPI:
- CVI:
- SID1:
- SID2:

Aerosol
- CPC 3025A:
- Filters 47mm:
- Filters 90mm:
- Neph - Dry:
- Neph - Wet:
- PSAP:
- AMS:
- CPC 3025 (AMS)
- INC:
- VACC:
- CPC 3010A (CVI):

Chemistry
- CO Aerolaser 5002:
- NOx TE42C:
- Ozone TE49C:
- Ozone TE49:
- SO2 TE43C:
- TDLAS (NIR) CH4:
- TDLAS (NIR) CO2:

- FAGE:
- Formaldehyde:
- NOx FAAM:
- NOxy:
- ORAC:
- PAN:
- PERCA:
- Peroxide:
- PTRMS:
- TDLAS (1C):
- WAS Bags:
- WAS Bottles:

Misc Non-Core
- CASI/ATM:
- LIDAR:
- LTI:
- SAW Hygrometer:

Faults / Incidents Log

Flight No. B348
Date: 23 February 2008

Instruments

1. Horace Display LAT/LONG not in agreement with either GIN, GPS or INU (which all agree).
2. Satcom problems during middle third of flight. May have been be caused by degraded GPS?

Deimos: some problems, esp with 50GHz channel. Aries: minor issues only.

Aircraft

Extended Range checks caused logistical problems prior to take-off!
Number two flight GPS intermittent throughout latter half of the flight.

ISDN Emails
Nil connections

Satcom-H Calls

1 to report position and get met info as satcom had fallen over

Issues

Post Flight - Turb Probe Water Traps

1. Indicate Amount of Water: a) Nil b) 1-2 drops c) ¼ full or more d) Ice present
2. Emptied by:
3. Dried by:

MISSING LOG SHEETS:

The following log sheets are not available for flight B348:

Log	Reason
Pre-flighter log	No log available
Core Chemistry	no In Flight log except in cases of instrument problems
PSAP log	No log as any PSAP pump/filter info included on Flight Summary page

Document control

Revision	Date	Author	Comments
r0	01 Apr 2008	Doug Anderson	Initial version missing the above noted logs
r1			
r2			

VIDEO RECORDINGS:

3 x Forward Facing Cameras
3 x Rear/Downward Facing Cameras

Further digital video recordings in avi format:

faam-video-ufc_faam_20080223_b348_194121_25hz.avi
faam-video-ufc_faam_20080223_b348_204302_25hz.avi
faam-video-ufc_faam_20080223_b348_210206_25hz.avi
faam-video-ufc_faam_20080223_b348_221632_25hz.avi
faam-video-ufc_faam_20080223_b348_232006_25hz.avi
faam-video-ufc_faam_20080224_b348_002203_25hz.avi

faam-video-dfc_faam_20080223_b348_194042_25hz.avi
faam-video-dfc_faam_20080223_b348_204252_25hz.avi
faam-video-dfc_faam_20080223_b348_210208_25hz.avi
faam-video-dfc_faam_20080223_b348_221422_25hz.avi
faam-video-dfc_faam_20080223_b348_221628_25hz.avi
faam-video-dfc_faam_20080223_b348_231957_25hz.avi
faam-video-dfc_faam_20080224_b348_002153_25hz.avi

faam-video-ffc_faam_20080223_b348_194115_25hz.avi
faam-video-ffc_faam_20080223_b348_204258_25hz.avi
faam-video-ffc_faam_20080223_b348_210202_25hz.avi
faam-video-ffc_faam_20080223_b348_221413_25hz.avi
faam-video-ffc_faam_20080223_b348_221625_25hz.avi
faam-video-ffc_faam_20080223_b348_232010_25hz.avi
faam-video-ffc_faam_20080224_b348_002159_25hz.avi

faam-video-rfc_faam_20080223_b348_194118_25hz.avi
faam-video-rfc_faam_20080223_b348_204300_25hz.avi
faam-video-rfc_faam_20080223_b348_210204_25hz.avi
faam-video-rfc_faam_20080223_b348_221417_25hz.avi
faam-video-rfc_faam_20080223_b348_221635_25hz.avi
faam-video-rfc_faam_20080223_b348_232001_25hz.avi
faam-video-rfc_faam_20080224_b348_002155_25hz.avi

Digital8 video recordings from this flight reside with :

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